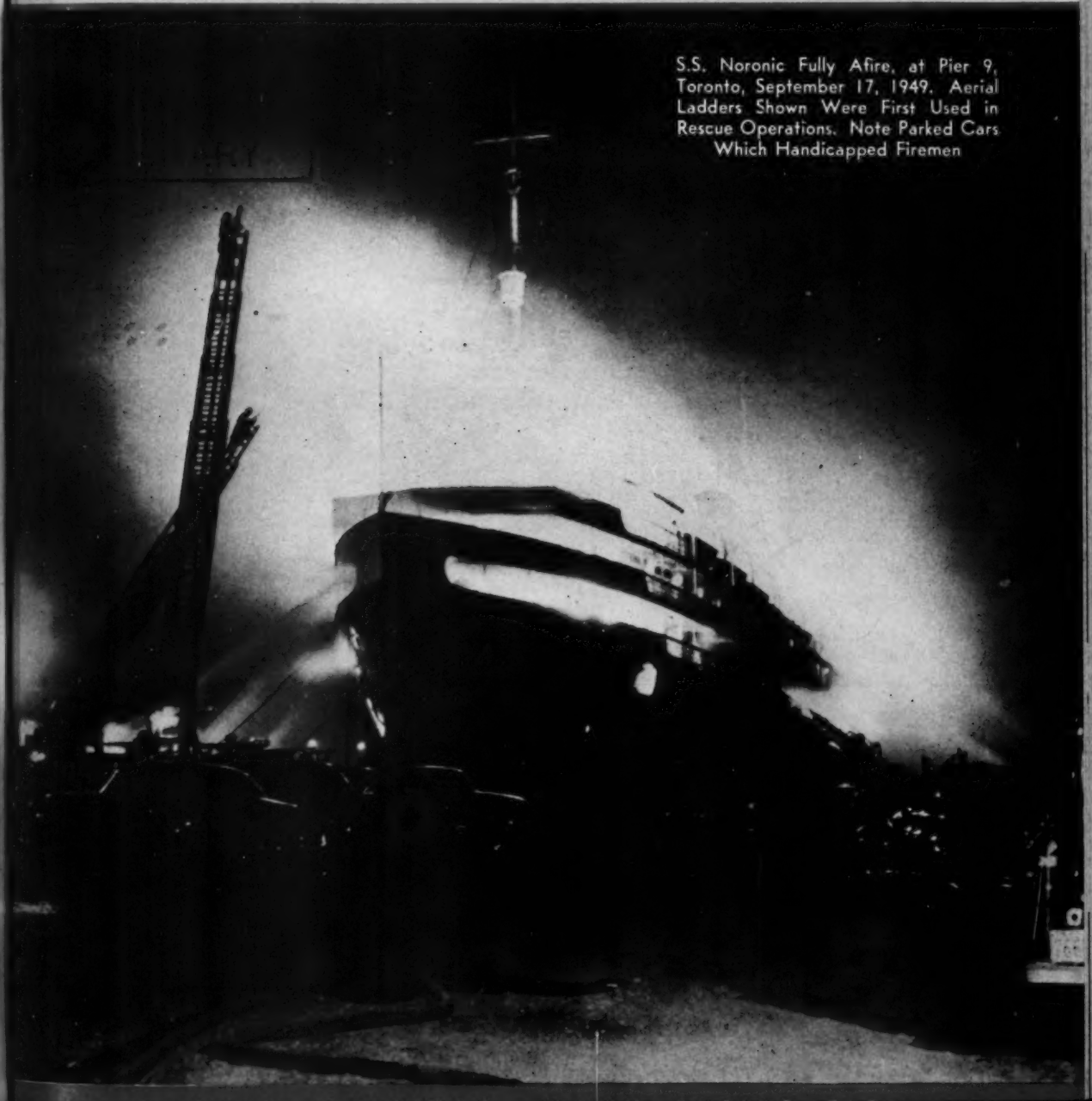
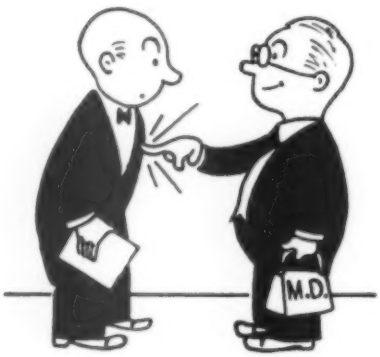
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

OCTOBER, 1949



S.S. Noronic Fully Afire, at Pier 9, Toronto, September 17, 1949. Aerial Ladders Shown Were First Used in Rescue Operations. Note Parked Cars Which Handicapped Firemen



Do You Know

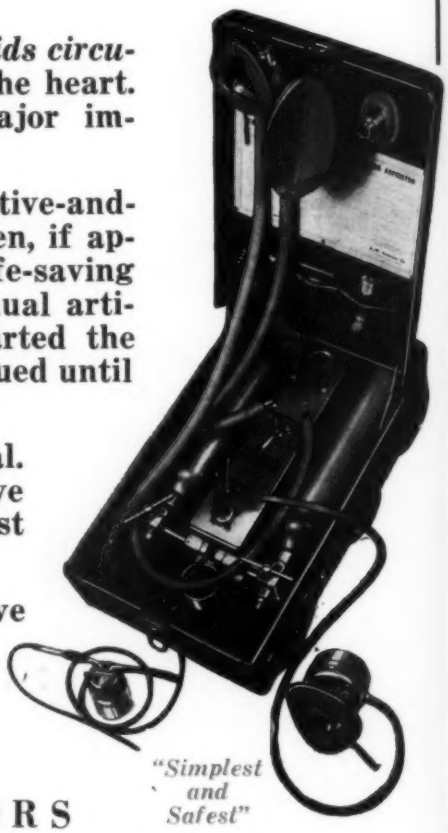
the value of negative pressure in modern resuscitators?

The negative pressure **phase of the cycle** ***aids circulation*** **by helping the return of blood to the heart. Restoration of the circulation is of major importance in preserving life.**

Medical research **shows that automatic positive-and-negative pressure resuscitation with oxygen, if applied immediately, is the most effective life-saving procedure in asphyxial emergencies. Manual artificial respiration, however, should be started the moment a victim can be reached and continued until the resuscitator "takes over."**

Speed in beginning **resuscitation is essential. For this reason, Emerson Resuscitators have been designed to operate with the utmost simplicity of control.**

Do ***your men*** **and** ***your community*** **have this unsurpassed protection?**



"Simplest and Safest"

You Should Have Our List of Recent Medical Articles

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Please send us your Medical References on Resuscitation ☐

Please have your representative call ☐

Name .....

Address .....

.....

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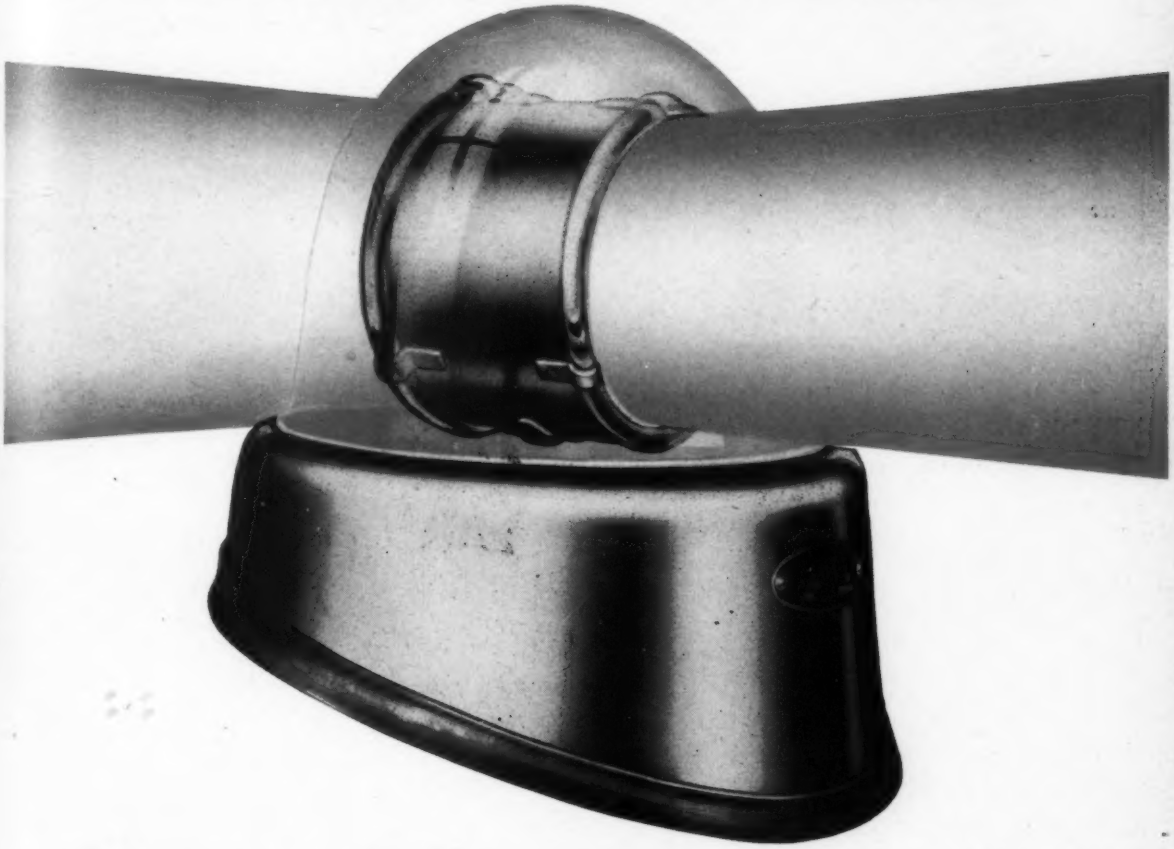
This is the Light!



The *new* Federal Beacon Ray Light

This is the LIGHT that created a sensation at the New Orleans Convention.

This is the LIGHT that will be the most widely imitated signal during 1950.

This is the LIGHT with complete 360° rotation providing visibility from every angle.

This is the LIGHT emitting two powerful rotating signal beams 180° apart *with all moving parts enclosed.*

This is the LIGHT that gives all around protection—running or parking.

This is the LIGHT you cannot afford to be without. Order your Federal Beacon Ray today. Write for full details on Federal #17 Beacon Ray Light.

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Formerly: FEDERAL ELECTRIC COMPANY, INC.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Anniversaries In Progress

WITH this issue we felicitate the International Association of Fire Chiefs, upon its 76th year of progress in the interests of the nation's fire service.

- At the same time we take a small bow, ourselves—this number marking the 72nd year of this "Journal of the Fire Protection Service."

- During these many years FIRE ENGINEERING has been pleased to report not only the progressive history of the organization which represents the fire service of the nation, and the world—but the international fire service itself.

- Much has happened during these years. Much is destined to happen in the days to come. However, whatever may transpire, both within and affecting the IAFC, and the fire service generally, readers of FIRE ENGINEERING are assured this Journal will endeavor as heretofore to faithfully chronicle events as they occur and keep our reader family posted at all times on the "who, what, where, when, why and how" of the fire service.

The Publishers

FIRE ENGINEERING

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...and most economical, too! Tests conducted by impartial, nationally recognized approval laboratories have proved the superiority of Ansul Dry Chemical Fire Extinguishers on ***Flammable Liquid Fires.*** In addition, Ansul Fire Extinguishers provide greater safety for the operator. The stream of Ansul Dry Chemical forms a protective screen safeguarding him against radiant heat.

More and more industrial plants, transportation companies, oil companies, etc. are switching to Ansul Extinguishers as their first line of fire defense. There is a reason . . .

Get the facts. Send for your copy of File No. 404. You'll also receive our latest literature together with comparative rating charts for the various types of fire extinguishers.

- **Safe for use on electrical fires too! Even high voltages are not conducted by dry chemical stream.**
- **Can be recharged at scene of fire furnishing continuing protection.**
- **Annual recharging is not necessary. Low maintenance costs.**
- **Longer range stream of dry chemical is effective in winds and drafts.**
- **Ansul Dry Chemical is non-abrasive, non-corrosive, non-toxic.**
- **Listed and Approved by Underwriters Laboratories and Factory Mutual Laboratories.**

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FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

DISTRIBUTORS IN PRINCIPAL CITIES IN THE UNITED STATES, CANADA, AND OTHER COUNTRIES

TRIPLE PROTECTION against FIRE

1. *Straight stream* can be discharged from the SG-48 Nozzle from small opening by a movement of the control handle, or

2. *High Velocity* WaterFOG with considerable forward projection from high velocity Fog tip, or

3. *Low Velocity* WaterFOG from LIGHTweight Extension Applicator. Fog tip is removed and Applicator inserted.

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TRIPLE-ACTION TYPE SG48 WaterFOG NOZZLE

Here is a fire fighting tool that gives *triple-protection* against fires in ordinary combustibles and flammable liquids — Rockwood LIGHTweight Triple-Action SG-48 WaterFOG Nozzle.

This improved Rockwood WaterFOG Nozzle will control or extinguish fires faster with less water and will provide firemen with greater protection from fire, smoke and fumes. It also permits firemen to reach the very root of the fire and to attack it with less physical punishment. Available in ¾", 1", 1½" and 2½" sizes for service on fire hose lines. Designed and constructed for use in municipal fire departments, industrial plants, chemical plants, mercantile and public buildings, oil refineries, etc. Rockwood WaterFOG is approved by Underwriters' Laboratories, and Factory Mutual Laboratories.

Write for bulletin C-501R.

ROCKWOOD (Heavy Duty) APPLICATOR CLIPS

For mounting Rockwood WaterFOG Applicators and other Rockwood equipment on fire trucks, walls, posts, etc. Clips are chromium plated and are highly resistant to corrosion. Write for prices and further information today.

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54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

100% more strength in the coupling area at no extra cost

B.F.Goodrich end protection adds years to fire hose life

HARD-WOVEN cords that reinforce the ends of B.F.Goodrich fire hose, more than double hose life in the coupling area. Most failures of ordinary hose occur near the coupling; but not a single length of end-protected hose has ever failed there. This exclusive B.F.Goodrich patented end protection adds years to the life of fire hose, yet costs you *not one cent extra.*

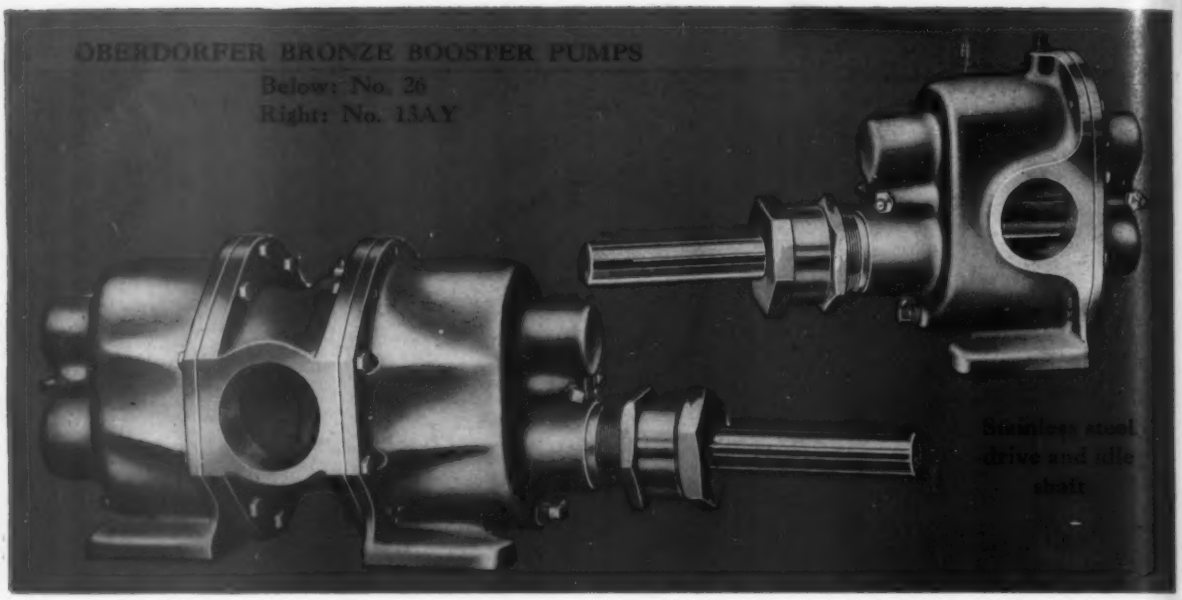
"End protection" is an added ply of hard-woven cotton cords that extends back for 12" from each end of B.F. Goodrich fire hose, to reinforce the tube. Then, when the coupling ring is expanded, when the hose is being hooked up or coiled, this extra cushion of protective cord keeps the tube from damage.

A stronger jacket makes B.F.Goodrich fire hose stronger too. This jacket is woven of more individual cords than go into an ordinary jacket, yet is no more bulky. The cords are pre-stretched and woven under tension to eliminate weak spots. Treated by the Hydroseal process, it resists freezing, waterlogging, mildew and rotting. Flat cure makes racking and coiling easier, reduces hose tension.

Couplings make a tighter union with B.F.Goodrich fire hose because of end protection. Available with all types of fire hose couplings. Special threads to match those already in service furnished at no additional cost.

Only B.F.Goodrich fire hose has end protection — a patented feature. No other hose on the market can give you as much hose service per dollar invested. Ask your local distributor to show you this fine fire hose. *The B.F.Goodrich Company, Industrial Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich



Greater pump efficiency and longer life proved by actual experience

Year after year, hundreds of municipalities steadily purchase Oberdorfer Fire Pumps for their fire fighting equipment. They do this because long experience has amply proved the strength of Oberdorfer claims to finer performance, longer life, and lower pump costs. Here are actual performance records of the Oberdorfer Fire Pumps shown above:

Pump No.	Pump Shaft RPM	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Volume in Gal. Per Minute
13	1600	120	500′—1½″	15′	75
13	2000	100	500′—1½″	15′	100
26	1600	120	500′—1½″	15′	150

The #13 Oberdorfer Pump lists at $69.00; the #26 at $172.50. Both are *corrosion-resistant all-bronze construction* with stainless steel shaft, assuring longer useful life than iron pumps costing far more. Slightly higher in price west of the Rocky Mountains.

If you want the maximum in efficiency, performance and long life for your department's pump dollar, it will pay you to specify Oberdorfer Bronze Fire Pumps. Write for catalog and name of distributor in your vicinity.

OBERDORFER FOUNDRIES, INC., SYRACUSE, NEW YORK

We have openings for experienced fire equipment sales representation in many desirable territories in the United States and Canada. We request that your complete selling experience be given by mail if interested.

FIRE DEPARTMENT SUPPLIES OF THE FINEST QUALITY!

American-LaFrance-Foamite offers a complete fine quality line of Fire Department Supplies, to fill every need of the modern Fire Department.

Seven grades of rugged durable fire hose: specialty nozzles such as the Alfcospray which operates from straight stream to full curtain, and the Poweron for live electrical hazards: Both Chemical Foamite Firefoam and Foamite Airfoam-Generating Equipment: and Fire Department Tools of every description for every need.

Whatever your requirements Alfco has a fine quality dependable product to offer you.

Write for illustrated literature and the address of our nearest representative.

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RESPIRATORY SAFETY by M·S·A

Approved by the U. S. Bureau of Mines

M-S-A Demand Mask

A cylinder-type breathing apparatus employing either oxygen or compressed air for ½-hour respiratory protection

This simple, easy to use Demand Mask supplies oxygen (or air) for the fireman in dangerous atmospheres according to his breathing demands, making him independent of outside air. Utilizing the M.S.A. Demand Regulator, the Mask's operation is automatic—a turn of a valve to start is all that is required. Non-fogging facepiece, comfortable light-metal carrying frame and padded leather harness are special, appreciated features. *Write for Bulletin B-16.*

M-S-A All-Service® Gas Mask

Protects against poisonous gases, vapors and smokes, wherever oxygen in air is sufficient for safety

The famous M.S.A. All-Service Gas Mask is known and used throughout America. Light, easy to put on and wear, this all-around Mask protects against every commonly-encountered breathing hazard (including carbon monoxide) except oxygen deficiency. The "All-Vision" Facepiece again made of flexible natural rubber affords wide-angle seeing with comfortable seal on the face—long-lasting canisters are quickly replaceable. *Send for Bulletin EA-8.*

FOR EVERY FIREFIGHTING HAZARD

Time-proved in service on the job!

THE UNIQUE

M-S-A Chemox®

SELF-GENERATING

Makes its own oxygen . . . as you breathe!

OXYGEN BREATHING APPARATUS

CHEMOX is the only breathing apparatus with a replaceable canister that generates oxygen as the wearer breathes. Just 13½ lbs. complete, CHEMOX delivers a plentiful supply of oxygen for a minimum of 45 minutes under hard firefighting exertion—affording dependable protection in unventilated areas where smoke, gases, and oxygen deficiency make air unbreathable. *Do you have our Chemox Bulletin B-14?*

CHEMOX is ready always for instant use. Canister is replaceable quickly, renewing service period at scene of action without delay.

Fog-free lenses—no moving parts—no high pressure valves or fittings—easy to maintain—simple to use.

MSA
SAFETY EQUIPMENT HEADQUARTERS

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STREETS · PITTSBURGH 8, PA.

At Your Service:

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

REPUBLIC experience looms large . . .

For years Republic has been one of the largest suppliers of fire hose. From experience, it knows the damages to the jackets and tubes caused by traffic, summer's heat, and zero weather. Republic hose will take these and other equally severe abuses. That is why you will never go wrong by insisting on Republic brands.

Wide World Photo

REPUBLIC FIRE HOSE

The jackets of Republic Fire Hose, made only of selected yarns, are plain, Provar Processed (mildew and vermin resistant), and waxed, or in any combination. Tubes have long ageing qualities. Five municipal grades, 3 industrial grades (also made with rubber or neoprene covers), and light weight hose for forestry service are available.

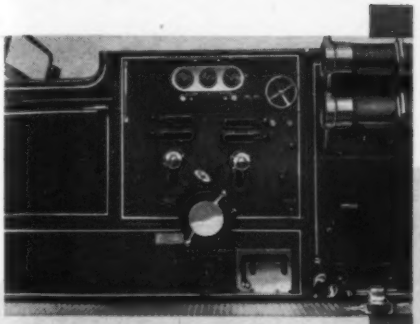
MECHANICAL RUBBER GOODS BY

REPUBLIC RUBBER DIVISION

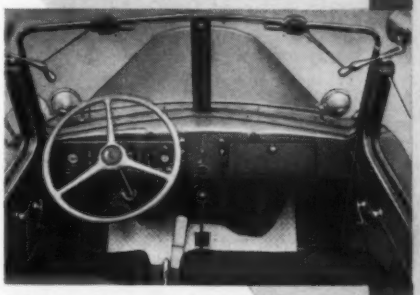
REPUBLIC RUBBER DIVISION

LEE RUBBER & TIRE CORPORATION · YOUNGSTOWN, OHIO

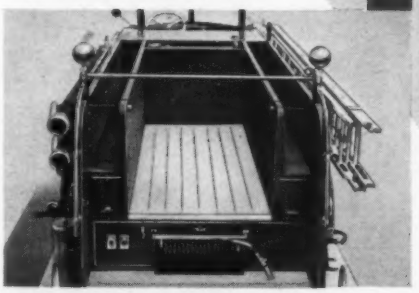
Lee Deluxe Tires & Tubes · · Conshohocken, Pa.



Mack pump controls are simple, compact, efficient. All gages, levers and connections are grouped together within easy sight and reach of operator.



Safety, comfort, convenience and visibility mark Mack driver accommodations. Note individual, adjustable driver's seat and handy, yet out-of-the-way location of parking brake.



Efficient body design assures quick accessibility to all equipment. Mack-built heavy-gage, all-steel body on Types 85 and 95 holds 1650 feet of 2½-inch hose; two side compartments hold 500 feet each of 1½-inch hose.

Mack Sets the Pace in Efficiency, too!

• Full fire apparatus efficiency is more than a matter of performance alone. Speed, power, pump pressures and capacities—these are important but more is needed. Skilled planning and workmanship are called for in every last detail of design.

From stem to stern, every Mack is designed and built for outstanding efficiency. Engines and pumps deliver full output without strain. Drivers' accommodations are arranged for maximum visibility, safety and ease of handling. All controls are easily reached and operated. Capacious hose bodies can be quickly packed and rapidly unloaded. Ladders and equipment are instantly accessible.

Macks set the pace in efficiency because they are the products of the greatest research, engineering and manufacturing resources in the field, with nearly forty years of uninterrupted motorized fire apparatus production. Let your Mack representative show how you get top efficiency—as well as pace-setting performance and reliability—when you *Modernize with Macks.*

Mack FIRE APPARATUS

7817

One of two Mack Type 85, 750-gallon pumpers recently delivered to Birmingham, Alabama.

Factory branches for parts and service in all principal cities. In Canada, Mack Trucks of Canada, Ltd.

Mack Manufacturing Corp.
Fire Apparatus Division
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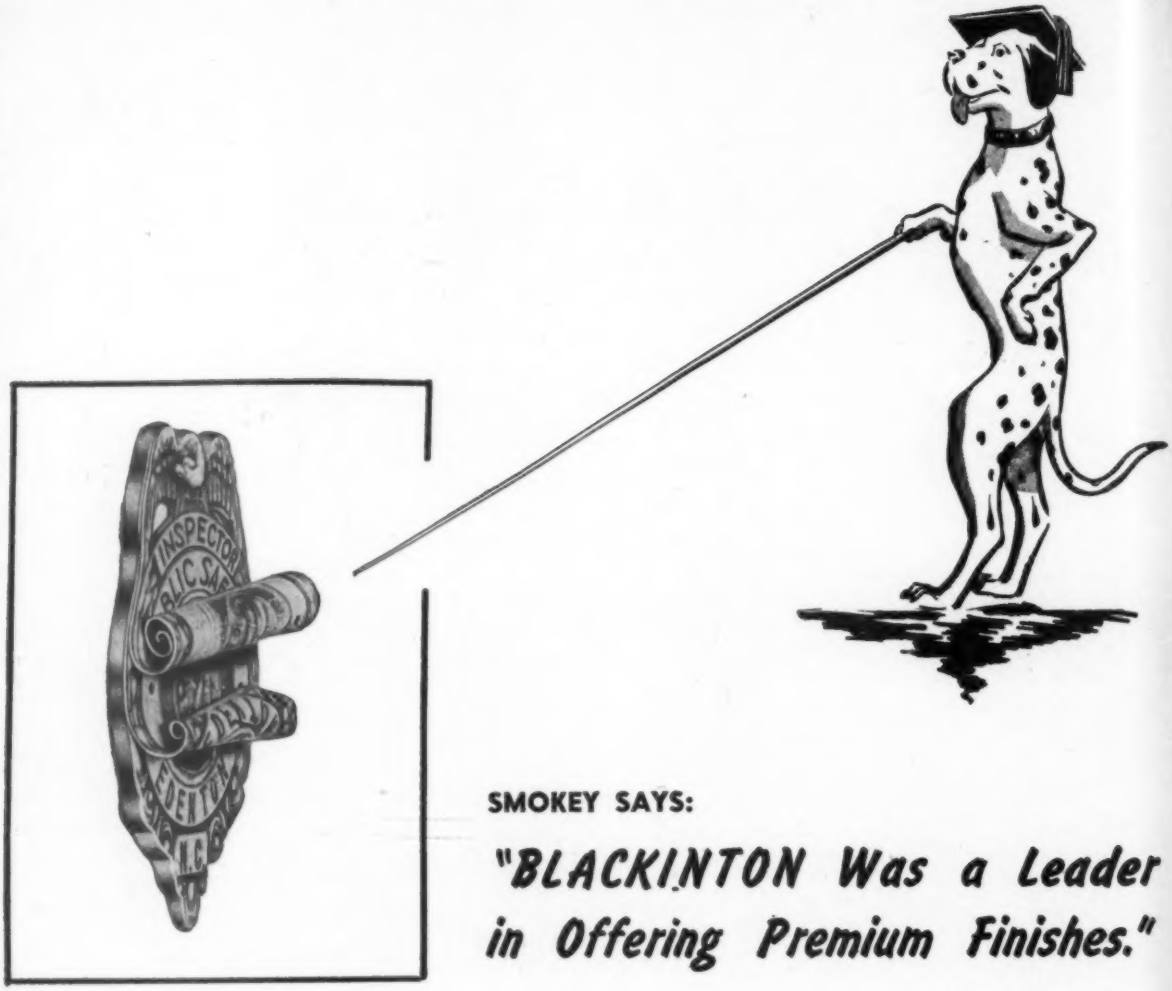
TRIPLE COMBINATION PUMPERS—500 TO 2000 GALLONS...SQUAD AND HOSE CARS...AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS



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Uniform houses, suppliers, etc.—let us show you the advantages of handling Blackinton badges.

V. H. *Blackinton* & CO., INC.

THE OLDEST NAME IN INSIGNIA
ESTABLISHED 1852

ATTLEBORO FALLS, MASSACHUSETTS

"Without our new E & J my 'boys' would certainly have had a losing case!"

recently wrote E. C. Kuehner, Chief, City of Chehalis, Washington, Fire department, following the first use of their E & J Resuscitator **donated only a few weeks earlier by the Chehalis Elks Lodge.**

RESUSCITATOR • ASPIRATOR • INHALATOR

Fire Chief Kuehner (cente[r] and rescue squad with their new E & J triple Re[s]uscitator

Changing the "losing case" into a succes[s]ful life-saving achievement happens with gratifying regularity when E & J Resuscitators are used.

The reason is simple. *In every possible way* the E & J is automatic, with no time lost making complicated adjustments or pressure selections based on an estimate of the victim's lung size or condition. The E & J *automatically* produces exact positive and negative pressures absolutely safe and correct for adult or tiny infant, *automatically* adjusts volume to any lung size, *automatically* signals if the upper air passages are obstructed, *automatically* signals the moment natural breathing is resumed. There is no chance of confusion or doubt, hence the operator acts surely and swiftly and with greater effectiveness.

See for yourself the complete simplicity, safety and dependability of E & J Resuscitators. A demonstration right in your Department is yours for the asking. So is the fact-filled folder, *Saving Human Lives.* Right now, while you're thinking of it, write for either to E & J, Dept. K-10, at the address shown.

IS YOUR BUDGET S-T-R-E-T-C-H-E-D?

Let your community *share in the satisfaction* of saving human lives . . . *their* lives, perhaps . . . by obtaining modern E & J Resuscitators for your Department through fund-raising programs. **This is how Chehalis got the E&J Resuscitator pictured above.**

It's easy when you use the popular E&J money-raising plan that has enabled Departments from coast to coast to be adequately equipped. Write for complete details today, *now!* No obligation, of course.

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GUARDING THE LIVES OF MILLIONS FROM COAST TO COAST

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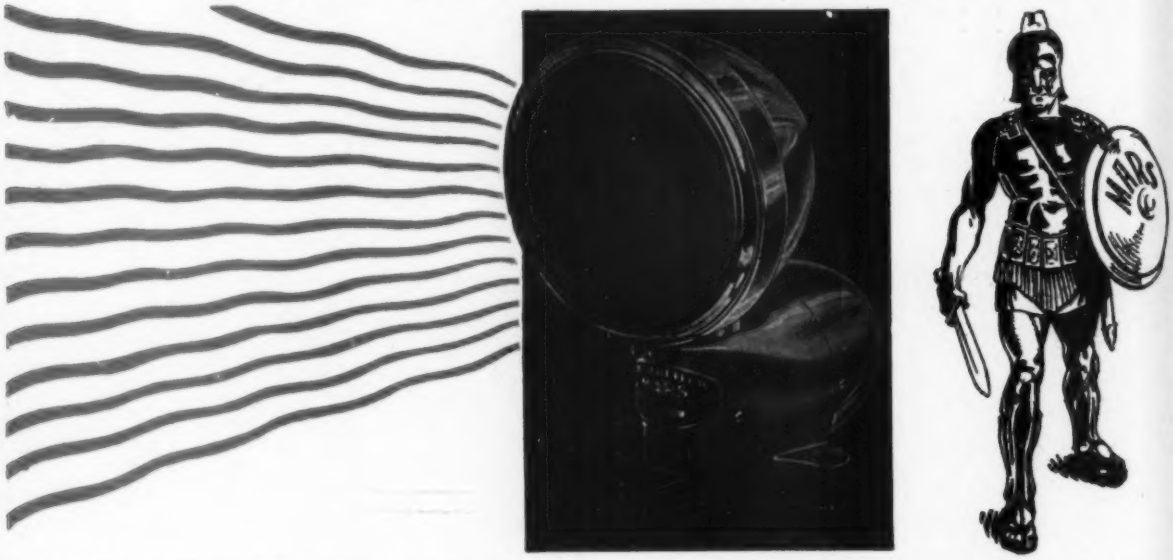
THE MARS SIGNAL LIGHT

It is the only OSCILLATING warning signal light that FLASHES a POWERFUL FIGURE 8 beam of red light—a mile ahead of your apparatus—from building line to building line—and hundreds of feet into the air. This POWERFUL FIGURE 8 BEAM of red light can be plainly seen by traffic APPROACHING intersections ahead of you LONG BEFORE you reach the crossing. Motorists everywhere recognize THIS light.



The Mars Signal Light Is America's Largest Selling Warning Signal Light

MORE THAN 12,000 ARE BEING USED BY OVER 300 LARGE CITY AND SMALL TOWN FIRE DEPARTMENTS FROM COAST TO COAST

MORE THAN TWICE AS MANY WERE BOUGHT BY FIRE DEPARTMENTS IN 1948 AS IN 1947

The Mars Signal Light Will Last As Long As Your Fire Apparatus!

So Far As We Know
All of These Lights Are Still Giving Satisfactory Service!

OF THE FEW MARS LIGHTS THAT HAVE BEEN RETURNED FOR REPAIRS PRACTICALLY ALL WERE DAMAGED IN SOME ACCIDENT

SNOW, RAIN, SLEET OR DUST CANNOT DAMAGE THE MARS SIGNAL LIGHT. ALL PARTS ARE FULLY ENCLOSED IN A WEATHER PROOF HOUSING.

Mars Light Is Fully Guaranteed for Five Years

Mars Has Never Failed to Back Up This Guarantee and Never Will

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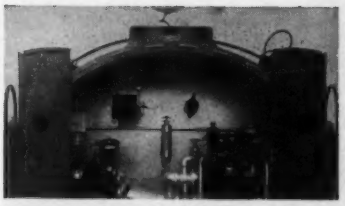
CHICAGO, ILL.

Insist on MARS when you order New Equipment — Install it on Present Equipment.

ALSO USED BY MANY OF AMERICA'S LEADING RAILROADS

ONLY *Smithco*

gives you a 2000 GALLON FIREFIGHTER



the NEW *Smithco* FIREFIGHTER

. . . designed especially for suburban and rural communities with limited water supply

The new Smithco Firefighter delivers the goods. No rural or suburban community can afford to be without it. Only Smithco gives you a 2000 gallon carrier plus all these extra features.

1. Hale Type FZZ Pump—60 to 150 G. P. M. @ 90 to 30# Pressure
2. 1500 Watt 110 Volt A. C. Light Plant
3. Three 250 Watt Floodlights, Cable, Adapters, etc.
4. Two 12' Aluminum Pike Poles
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6. Two 10' Sections of 2" Suction Hose with Quick Detachable Couplings
7. Three hundred feet of 1½" Underwriters "DJ" Hose
8. Two hundred and fifty feet of ¾" Booster Hose
9. One ¾" Mystery Fog Nozzle
10. Two 1½" Mystery Fog Nozzles
11. One 1½" Siamese Connection
12. One 24' Aluminum Extension Ladder
13. Four Rubber Rainsuits and Hats
14. Two 15-pound CO_2 Extinguishers
15. One Pioneer Rack with Axe, Pick and Shovel
16. Two 5-Gallon Fuel Cans

RECOMMENDED TRACTOR—F7 or F8 Ford, WC-20T White or Equal

Phone, wire or write today for further information!

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CAMP HILL, PA., SYRACUSE, N. Y., PHILADELPHIA, PA.

The Original MIDWESTERN Yellow Striped Safety Coat Is Again Available . .

for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property Against FIRE!

Modern fire fighting calls for ***specialized*** protective clothing . . . clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and, by placing your order early, you can be assured of this adequate protection when needed.

For complete information, have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

NONE GENUINE WITHOUT THIS TRADE MARK

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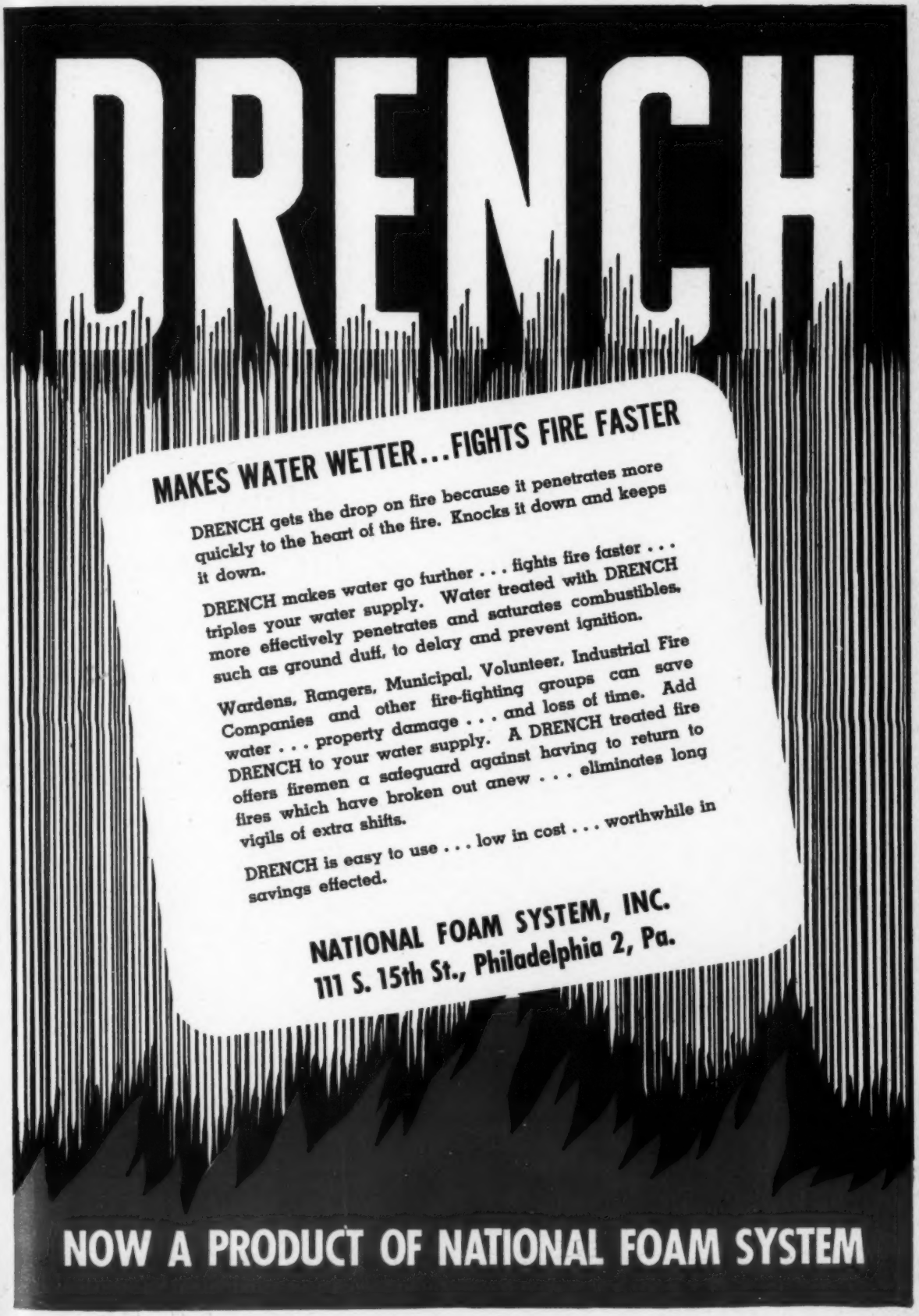
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FIRE ALARM BOXES

saves human lives and property

Joseph Golden, 10 years old, shows how he sent the alarm. Joe had been taught in school the purpose of the box and how to use it. When an emergency occurred, he acted promptly.

WOMAN'S LIFE SAVED

An elderly man was burned to death and his widowed sister, trapped by smoke and flames on the top floor of their South Boston home, was overcome by hysteria today.

The dead man is Patrick F. Sullivan, 71, a retired New Haven Railroad clerk, in whose kitchen on the second floor of the house at 152 H St., South Boston, the fatal fire started shortly after 9 a.m.

At City Hospital being treated for hysteria is Mrs. Helen Wall, 70, a widow and Sullivan's sister. Fire Lt. John O'Mara of Ladder 19 and members of his crew rescued her when they found her crouched on the top of the back stairs of the house. She lived on the third floor.

The alarm for the fire was sounded by Joseph Golden, 10, of 457 East 6th St., South Boston, who saw smoke pouring from the house and ran to the nearest fire alarm box.

BOSTON GLOBE

We invite your inquiry

THE GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
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FIRE ENGINEERING

OCTOBER, 1949 VOL. 102, NO. 10

With the Editor

Keeping Our Sights High

Speaking before the 76th Annual Convention of the International Association of Fire Chiefs in New Orleans last month, President Chief Henry Chase sounded a tocsin for the fire service.

His theme is that, although much has been done by those who helped found the Association and advance the fire service, and great strides have been made in the science of fire control in recent years, much remains to be done. The tempo of living has been stepped up, and the tempo of fire with it. Yesterday's ways, methods and facilities won't do for today—and tomorrow. In this world of movement there is no standing still. We must either go forward or go back.

"I can remember," said Chief Chase, "when it was said by many that we could not provide textbooks on fire fighting, that every fire was different and that experience was the only teacher. Time has proven this false. I can remember, too, when it was said that horses were the only dependable method of moving fire apparatus to fires. Again they were wrong. I can remember when some of the most progressive chiefs in the country advocated the use of 1½-inch hose and many threw up their hands in horror. But many of these same people are today using 1½-inch hose. I can remember when the use of two-way radio was scoffed at; and again, I say they were wrong. Then came the fog nozzle: many said it had a very limited use, and today I say, Oh! how wrong they were!"

The fire service has always had its skeptics and scoffers—its "aginners", who are opposed to forward progress. Few of them remain and some of these are serving their last years in their departments and are content to coast along on the methods and momentum of yesterdays. Probably they are justified in following the motto: "Don't stick your neck out!"

If the fire service was forced to depend entirely upon these ultraconservative officers, there would be less hope for the future of the fire service, and of fire control in this country. Fortunately, there are leaders who are willing to stick out their necks —to risk the criticism of their fellow firemen, to investigate and experiment with everything and anything that may hold forth promise of improvement in their chosen calling. These souls are the mainstays of the fire service and the backbone of the International Association of Fire Chiefs. To them we offer grateful acknowledgment of their courage, vision and effort.

Raise Your Sights

Good counsel along the lines of the foregoing was recently offered by one of the nation's outstanding fire chiefs, John Alderson of the Los Angeles Fire Department. He said, speaking for the fire service: "As administrators of fire departments, it behooves chiefs to elevate their sights, to take a broader view of their duties and responsibilities. I am more than a fire chief; I am part of the greatest and most daring experience which has been made in the government of men since the beginning of time. I am part of the democracy of the United States. I am part of the experiment and example which is being offered to the world to follow." He concluded, "I suggest to every fire chief and every potential fire chief, that he lift his vision just a little above the administration of a fire department . . . the transfer of a fireman—the decision on a fire prevention notice . . . the question of unionism or days off for salary or political considerations—and consider himself as a part of government in this country and as an individual who will have eventually a material effect on whether or not your government—my government—and the system which we have all learned to believe in and to rely on will continue or will fail."

Fred Shepperd

S. S. Noronic Fire Worst Inland Marine Disaster in Century

Toronto Firemen Face Many Obstacles in Rescue and Extinguishing Operations

A SPECIAL REPORT TO FIRE ENGINEERING

Editor's Note: **The drama and tragedy of the S. S. Noronic holocaust have been told and retold by press and radio. As is so often the case, these accounts contained little or no mention of the vital role played by the fire department and other emergency services in the saving of life and property.**

Fire protection engineers are fully conscious of the tragic aspects of every serious fire. By virtue of their very calling sudden tragedy is ever present at their elbow. But their calling requires that they concern themselves not so much with the human interest phases of the catastrophe, as with the factors behind the drama—the causes and effects, in terms of corrective methods and measures.

For this reason the editors of FIRE ENGINEERING have endeavored to give their readers the story behind the headlines, particularly the technical details of the fire fighting and rescue operations.

This could not be done without the help of the agency most qualified to provide that fundamental information—the Toronto Fire Department. Therefore, it is with a deep sense of obligation to Fire Chief Peter Herd, Deputy Chief Albert Steen and their aides of the department that we offer this account of the destruction of the S. S. Noronic. The only liberties taken with their report were necessary when, because of modesty, or for the sake of brevity, they played down their own accomplishments.

Special appreciation, also, is extended to FIRE ENGINEERING's Toronto correspondent, J. K. Lee, whose on-the-scene account and illustrations have been most helpful.

IN the early hours of Saturday, September 17, 1949, fire raged through the S. S. Noronic of the Canadian Steamship Lines, resulting in the worst inland marine fire disaster since the burning of the S. S. Phoenix in Lake Michigan with a loss of 247 persons. Before the end of the month the toll of known fatalities had reached 136 with many unaccounted for and some injured still in hospitals.

As this is written Federal, civil and other investigations are being conducted to determine the cause of the fire, the reasons for its rapid spread, the delay in notifying the fire department and who or what agency if any, was responsible. The time worn charges of neglect, inefficiency, incompetency and panic on the part of ship's officers and crew are being aired, together with counter charges that drinking and partying were rampant among the cruise passengers.

Only the Toronto Fire Department appears to have escaped the criticism of passengers, ship owners and crew alike. Reading the following account of operations of the fire department it is clear first, that the firemen faced a hopeless fight from the outset as a result of the delayed notification and other handicaps and, secondly, that they waged the uphill struggle with all the skill and energy at their command. Dreadful as was the disaster, it is appalling to conjecture what the loss of life might have been had the ship been far from shore and no trained, well organized municipal fire force available to aid in rescue and extinguishment as it was in Toronto.

While attention naturally centers upon the destruction of the ship and the dramatic efforts to save its hapless and helpless human cargo, another phase of the holocaust should not be overlooked. That is the fact that the fire department confined the conflagration to the Noronic itself, preventing extension of the roaring fire to two other vessels moored nearby, and the dockside structures, some of which were igniting in the radiated heat as the fire forces pulled in.

It is often difficult to visualize in its right perspective a fire of this magnitude. Such a fire involving property in a 380-foot block of structures at least five stories in height, would tax the resources of any modern metropolitan fire department, even without the terrific life hazard involved. Given just a few minutes earlier notice, the Toronto fire fighters would unquestionably have been able to carry their fight on the fire aboard the ship itself. What this would have meant in the way of rescue of personnel through protecting exits and restoring confidence to the frightened pasengers can only be conjectured.

The Noronic fire was controlled with a three alarm assignment of Toronto firemen, who sacrificed nothing of rescue work to the critical need of confining the blaze to the Noronic. That they were unable to carry the attack sooner on the fire aboard the ship herself must be charged to factors over which they had no control.

Photo Courtesy J. K. Lee

Looking Along Port Side of Still Hot Ship. Toronto's 1,000 GPM Fireboat (Upper Left) Still at Work. Ship Has Settled on Bottom.

Prelude to Tragedy

The S. S. Noronic of the Canada Steamship Lines was making her last cruise of the summer. Her destination was Prescott, Ontario, and the Thousand Islands. Most of her passengers came from Detroit and Cleveland, and practically all the casualties were from the United States. According to a passenger list released by the steamship company on September 18, 187 persons had boarded the vessel at Detroit and 324 at Cleveland. The company reported a total of 524 passengers and a crew of 173. It was reported that a large percentage of the passengers were middle aged, or older.

From Cleveland the ship proceeded through the Welland Canal and across Lake Ontario to Toronto, where she docked at Pier 9, foot of Yonge St., at 6:00 P.M., September 17, with her bow facing toward the city. She was scheduled to depart at 7.:00 P.M. on the 18th.

The vessel, largest Canadian passenger liner on the Great Lakes, had somewhat of a tumultous career in later years. For a few days in 1946, she roamed the Detroit River as a ship without a port. Because of a seaman's strike no harbor would accept her with a non-union crew. The Noronic docked at Detroit June 3, after a three-day battle with striking seamen in the Welland Canal, where the ship ran a blockade of strikers who smashed more than 100 portholes and windows. She finally found haven in Sarnia, Ont., her winter port. On August 15, 1943, the big vessel lost a propeller while on a cruise, and passengers had to return home on a chartered train.

Only the day before the holocaust a small stateroom fire was reported extinguished aboard the vessel. Witnesses also reported "trouble among the musicians" on the final cruise.

After docking at 6:00 P.M., many passengers went ashore to see the sights. Most of those who remained aboard gathered for a dance held later in the ballroom off the main salon. The dance ended about 2:00 A.M., by which time the majority of those who had gone ashore had returned to the vessel and retired.

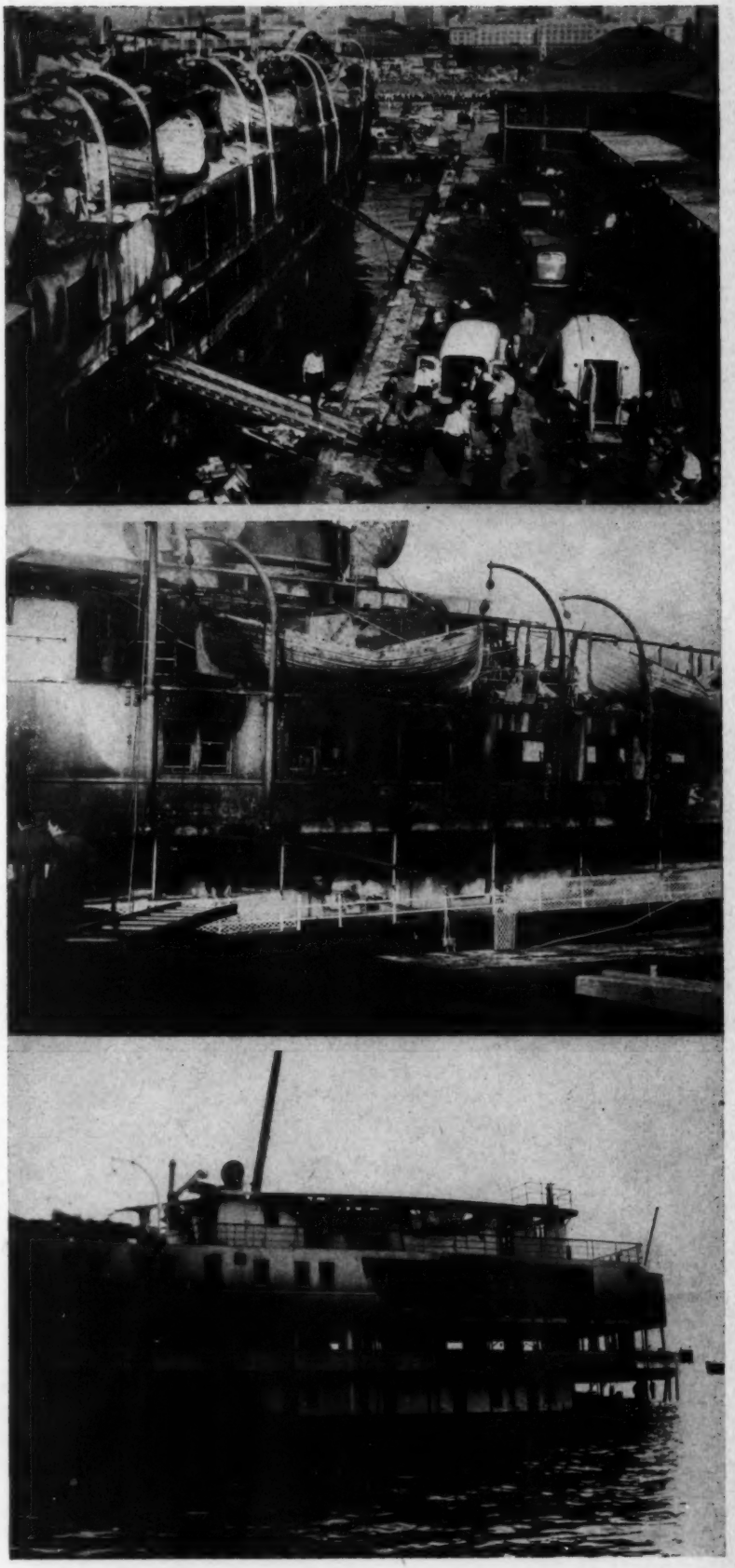
The ship's bars were closed at midnight but passengers could secure "set-ups" for their own liquor, as well as refreshments. After the dance a few parties continued in the social halls, lounge and in some of the cabins.

As was customary, only a skeleton crew was left aboard the ship after she docked[1]. A mate was reported in charge of the ship. The first mate was said to be asleep in his quarters, when the fire started. The chief steward was on duty and some cabin stewards and bell boys were reportedly serving the passengers. The Captain, William Taylor, 65, had gone ashore earlier in the evening.

Two other vessels of the line, the S.S. Kingston and S.S. Cayuga, were docked nearby (see Figure 1), the latter ship having only just completed a midnight cruise. Almost her entire crew was aboard.

Accounts differ as to whether or not

[1]Reports of witnesses vary as to the size of this skeleton crew, also on the subject of watch officers and deck watch. Four ship's firemen, a water tender and the third engineer were said to be in the fire room cleaning boilers and were notified of the fire by a stoker, who had gone to the dock for fresh air.



From Top to Bottom

Photo Courtesy J. K. Lee

The Burned-Out Ship Yields Its Victims
Ambulances at quay-side receiving bodies brought out by firemen, as small boats grapple for victims.

Photo Courtesy Toronto Fire Dept.

Further Evidence of the Terrific Heat
View of starboard side near midship. Boat deck (top) burned off; promenade and spar decks gutted. Note windows and ports—those along promenades were covered with metal screens.

Photo Courtesy Toronto Fire Dept.

Stern of Burned Out Noronic Rests on Bottom
Port side of stern showing a small section of cabins still unburned. Boats in rear grappling for victims.

there were any watchmen patrolling the vessel at that hour of the morning. Evidence on this score is contradictory. It has been said that, while at sea, regulation deck watch service was maintained, at dock the patrol was relaxed, particularly on the last cruise of the season. Testimony was given that persons were allowed to board and leave the ship without scrutiny or checkup. There were watchmen and security police on the pier, however, and they were said to have turned in the first alarm of fire.

Such was the situation at approximately 2:30 A.M. on the morning of Saturday, September 17, 1949.

Ship in Her 36th Year

The S.S. Noronic was built in Port Arthur, Ont., and launched on June 2, 1913. At this time she had three decks. Two were added shortly after at Lorain, Ohio, at which time the hull construction was modified. She was of Canadian registry, 6,905 tons gross—3,935 tons net. Her home port was Sarnia, Ont.

The six decks were: main, spar, promenade, observation, hurricane and boat. These were given alphabetical enumeration from the top down, viz.: "A," "B," "C," etc.

The ship had an overall length of 385 feet; 363 feet between perpendiculars; 82 foot moulded beam and 28 feet, 9 inches moulded depth. She was built on the Isherwood system, with watertight compartments, but with no fire bulkheads or stops. The propelling power consisted of four Scotch coal-burning boilers, with 200 pounds working pressure, all connected with forced draft. There was also an auxiliary boiler. Propelling power was a vertical, four-cylinder, triple expansion engine, developing about 5,000 H.P.

According to William Craig, an inspector who conducted the ship's last inspection on April 23 last, there were three main pumps and one smaller pump for fire protection. One hundred and fifty pounds pressure was required to operate all these pumps on the ship and one boiler was considered sufficient for the purpose. Each of the pumps was capable of supplying two streams of water to any part of the ship. In tests made at the time of the last inspection, six hose lines discharged water 125 feet "at the rate of 200 tons an hour," Craig testified.

The inquiry developed the fact that the three fire pumps were fitted in the same space in the engine room although regulations required that they should not be in the same space. Asked why this was not reported, the witness said, "They were in good order and I don't see any reason for separating them."

Although a majority of the ship's standpipe outlets had single openings, some of them had two. The outlets—53 in number—were so placed that hose from at least one of them could reach any particular part of the ship. It was disclosed that the nearest standpipe outlet to the linen room, where the fire is said to have originated, was on D deck about 50 feet distant. This was a single outlet. A second outlet in the after-end of the ship was about 52 feet away but no one could say how a hose line from this outlet could be brought to bear on the linen closet. Ship's officers are said to have ruled against coupling two lengths of standpipe hose for a single stream.

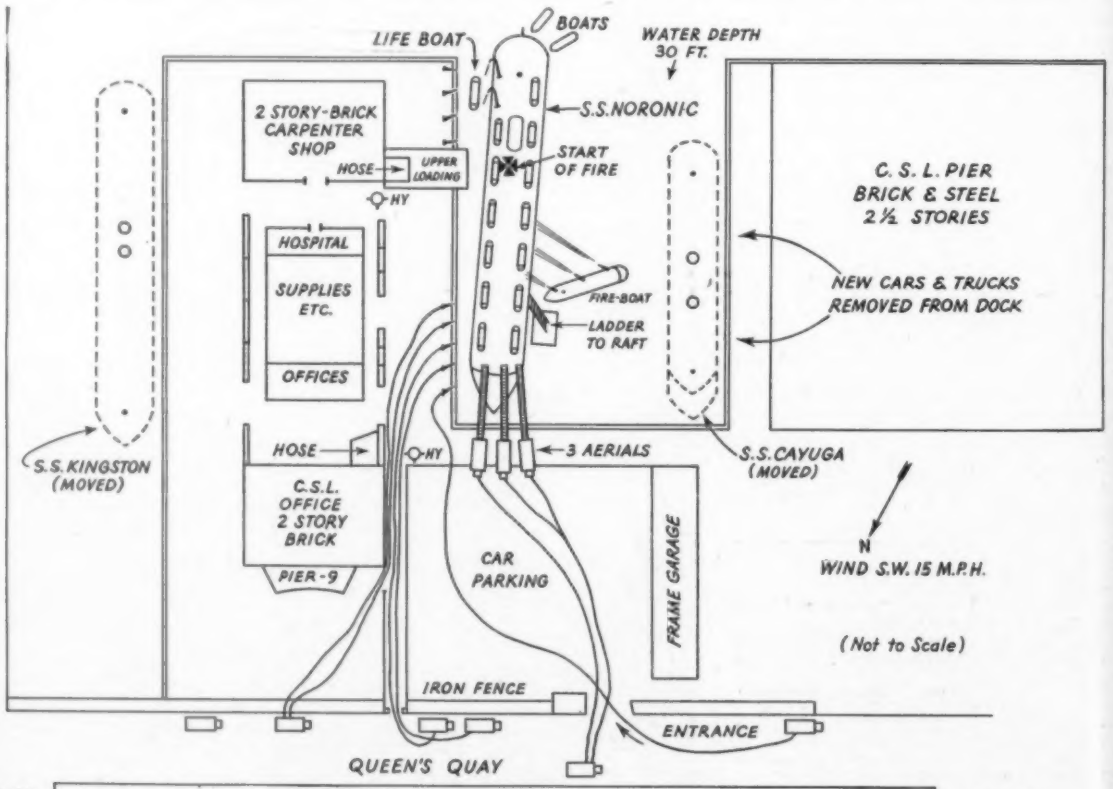
The Noronic, at the time of the final inspection, had 1,850 feet of 2-inch canvas hose; 1,500 feet of 2-inch hose of another type, and 800 feet of 1-inch hose, all in 50-foot lengths. The 1,850 feet of 2-inch hose was on deck, outside the cabins. The 800 feet was within the ship.

In addition to the fire extinguishers enumerated elsewhere, there were on board "miner's safety appliance" equipment, according to regulations. This included breathing apparatus, helmets and safety lamps. There were also 72 fire buckets, more than the required amout.

The Stateroom Layout

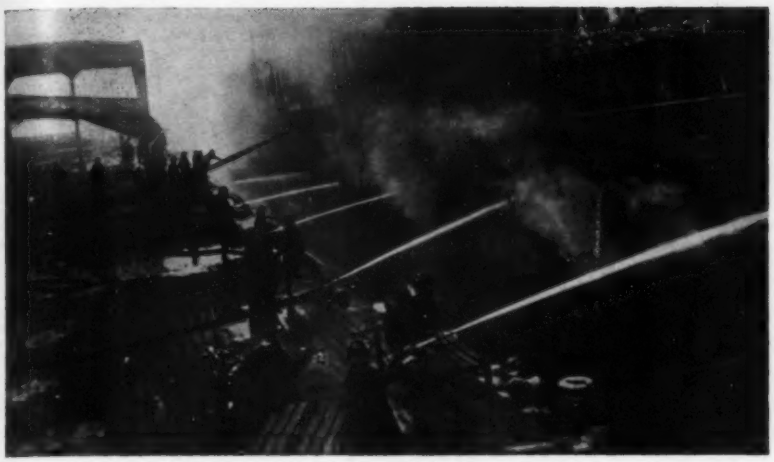
The entrance hall, or lobby was on the main deck. The side walls were panelled in quartered oak with interlocking rubber tiling floors. The main stairway led to the social hall on the spar deck on which there were 151 staterooms with toilet rooms, bath rooms, barber shop, etc. The main corridors of the spar deck were finished in white enamel, with the social hall panelled in quartered oak.

The next deck was the promenade deck which was panelled throughout in mahogany. At the forward end was the drawing room, fitted with lounges upholstered in Spanish leather. Aft of the drawing room were ten suite cabins,



Courtesy J. K. Lee

Figure 1



Firemen Attack Burning Noronic from Pier
Some of fifteen hose streams directed into starboard side (see Figure 1), looking aft soon after daybreak. Note open ports.

furnished in mahogany. The smoking room was at the after end of this deck. Seventy ordinary staterooms were on this deck. There was a wide promenade extending completely around the vessel. The distance around was 880 feet or six laps to the mile.

The next deck was known as the observation deck, with observation room, dining room, kitchen, storerooms and refrigerating rooms. The observation room was situated at the forward end and was 140 feet long, panelled in quartered oak. The dining room measured 180 feet long by 50 feet wide and seated 286.

The boat deck, next above the observation deck, was finished throughout in quartered oak panels; a large dome skylight fitted overhead, extending the full length of the cabins. There were 48 staterooms on this deck, together with large public toilet rooms. The officers' quarters and pilot house were located forward, and some of the crew's quarters, mess rooms, recreation rooms and bakery were aft.

Doors to the ship's cabins were wood and had snap-locks. It was reported some had slotted vents for air. The lower hold was divided into four cargo compartments, each provided with two hatches through the main deck. 'Tween decks had five gangways on each side in addition to the passengers' gangway and engineers' gangways.

There were no fire doors or bulkheads on any of the decks to prevent the lateral travel of fire. Howard R. Baxter, shore captain for the C.S.L., testifying at the Federal Inquiry, said that it would not have been practical to install new fire resistant bulkheads in the ship because it would have affected her stability and necessitated structural changes "that would have cost $250,000."

The Noronic was the last of the former three-ship fleet of the Northern Navigation Company to be in service under its late owners, the Canada Steamship Lines. She was the only ship making the northern Great Lakes runs from Windsor-Detroit to Duluth. A sister ship, the Harmonic, burned in 1945 at Port Huron with one fatality.

The ship's deck diagrams show that the second, or D deck, in later years, had a central passageway running the length of the ship. Off this corridor ran side passageways to port and starboard with six double bunk rooms to each hallway. Outside staterooms on the spar and promenade decks had windows amply large enough to permit passage of a normal person. These window type ports were covered wholly or partially by metal screens. A large "open well" was cut in the boat deck forward to give light into the promenade deck below.

Throughout the ship there were no directive signs in cabins as to boat and fire stations to be taken by passengers in an emergency, it was reported. According to Inspector William Craig, the ship had no red lights to indicate exits and stairs, and there was no public address system.

As indicated above, the interior construction and furnishings of the Noronic were for the most part flammable material, of a type common to vessels built in her day. Furthermore, the layout of corridors, passageways and large open areas was conducive to rapid fire travel.

Midships a large flight of stairs led up from the social hall of the spar deck to the social hall of the promenade deck (on which the fire is said to have started). Upholstered seats were arranged around these halls. The purser's office was located on the port side of the spar deck's hall.

Stairways fore and aft connected the spar and promenade decks; the after stairway also provided a vertical artery leading to the boat or top deck. These stairways had no doors or cut-offs and extended upward and downward as open passageways. Further, they opened directly into the long midship passageway that bisected the vessel laterally, or else connected with transverse passageways.

A factor that is having attention is the question of the extent to which the reported numerous coats of paint and varnish on the ship's interior had in spreading the fire. Until all the evidence is in, this question cannot be answered. The royal commission, investigating the disaster, has questioned Dr. C. Y. Hopkins of Ottawa, research chemist of the National Research Council and specialist in protective coatings, on this subject.

Fire Protection Facilities

The ship's fire protection equipment included (in addition to the fire mains and hose and breathing equipment, previously mentioned) 56 first aid fire extinguishers: 10 of the vaporizing liquid type and 46 soda-acid and foam types.

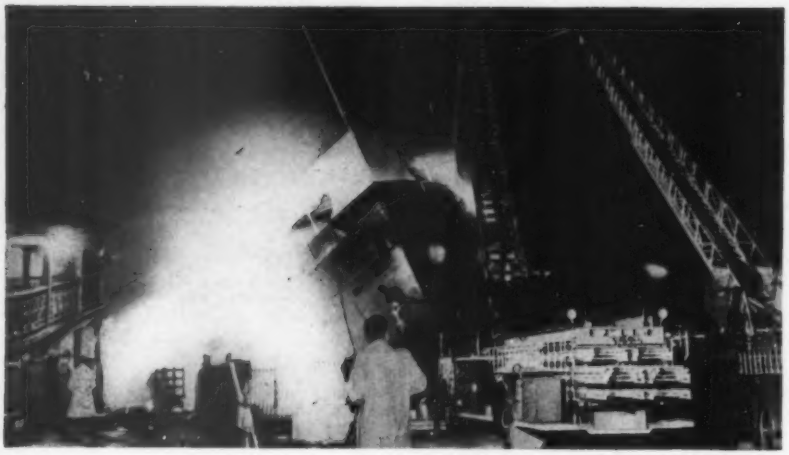
There were no fire or smoke detecting or sprinkler systems covering the passenger area of the ship, it is reported.

Considerable emphasis was laid on the detail of automatic fire alarm systems at the royal commission hearings. The Noronic had a so-called "new" manual annunciator system which was operated by breaking the glass in an annunciator box, numbers of which were located throughout the vessel. When a glass was broken a warning signal was sent to the steward's office, mates' hallway and the engine room. On receipt of this signal the fire pumps were speeded up and the mate on the bridge was supposed to push an alarm button which sounded sirens throughout the ship, giving a general alarm. The ship's whistle also was supposed to blow an alarm.

Inspector Craig testified that he had tested this alarm system by breaking the glass of boxes. He admitted that the type of box used was susceptible to accidental breaking.

Photo Courtesy Toronto Fire Dept.

Evidence of the Terrific Heat in Noronic Fire
Metal stanchions and supporting beams buckled, collapsing under decks. View shows boat deck dropped onto promenade deck (on which fire started).



Extinguishing Operations at Bow of Burning Noronic
Scene before daylight after all hope of further rescue was gone. Ship lists toward dock from weight of water—later vessel settled on an even keel in about twenty-eight feet of water.

Other witnesses testified to the apparent failure of the alarm system to function during the fire. Glass in annunciator boxes was broken by passengers and crew members, but many of the former swore to hearing no sirens or bells or whistles.

Confusion of Whistle Signals

Statements of witnesses are at conflict on the subject of the steamer alarm whistle. A majority of those who were in the ship at the outbreak of the fire testified to hearing no whistles at all, or until some time after they had escaped, and then they could not agree whether the signal heard was the Noronic's whistle or that of a nearby vessel. Persons on the dock, however, and some crew members, testified to hearing steamer whistles. One witness placed the sound as a "tied down whistle"—sustained in volume. Another identified it as four warning blasts. Until all the evidence is in, however, this question must remain unsolved. The incident, does appear to indicate the need of some standard marine warning signals for ships in distress and of some uniform regulations pertaining to such signals.

One reason advanced for the possible failure of the ship's alarm system is that, when at dock, the ship's bridge is not always occupied at night, therefore no ship's officer or seaman might have been available on the bridge or pilot house to blow the whistle or push the alarm button at the time of the fire.

Delayed Discovery and Alarm

It has not been determined at this writing who first discovered the fire or how long it had been burning before discovery. Reports indicate that passengers first found it and notified crewmen. That there was a serious delay in notifying the Toronto Fire Department of the fire has been established. Only the length of time of the delay remains in question. But whatever the period, the priceless minutes wasted were a telling handicap to the fire fighters and, in turn, a contributing factor in the heavy loss of life.

Just who or what caused the delay doubtless will never be revealed, but according to reliable witnesses speaking before municipal authorities there was an effort on the part of the ship's skeleton crew to fight the fire with the ship's own equipment "for a considerable time."

A representative of the steamship company fixed the time of the fire at about 2:25 A.M. This witness believed the fire had been burning for as long as 15 minutes. Inasmuch as the department received its first notification at 2:38 A.M., this would indicate almost half an hour's delay. Toronto's Mayor McCallum said the fire started at 2:30 A.M. "and perhaps earlier," and "the crew attempted to fight the fire themselves." He said, "That has been confirmed by the fire department which found the ship's fight fighting equipment on deck and fire cocks open when it got there." This was also reported at hearings by Deputy Chief Steen.

It took the first-due units of the fire force not over three minutes to reach the pier from the Adelaide Station. This would place their arrival at close to 2:41 A.M. Yet by that time the fire could be seen at some distance, so much so that District Chief J. Stevens, responding on the first call, radioed for a second alarm while still en route. This was clocked by the department at 2:41 A.M.

It has been determined that no one from the ship notified the fire department directly. The first notice was received by telephone from Pier 9. This

Rescue Operations—One More Saved
Woman fished from water onto raft near bow of burning Noronic climbs fire ladder to pier. Rescuer at left is Detective Cyril Cole, who, with other policemen, shed clothes to dive after floundering victims.

Many Saved by Ropes at Bow of Burning Ship
Evidence that at least one ship's officer helped in rescue efforts. One woman descending rope—others waiting as flames menace. Many passengers suffered rope burns and immersion when their slides to safety dropped them into chilly waters of bay.

Fire Ladder a Stairway to Safety
D. M. Condon, Detroit lawyer, escapes from blazing Noronic in full attire, complete with cigar and brief case. Aerial is newest 100-footer of Toronto Fire Department, extended almost horizontally, braced with metal ground ladder (below right).

was sent by a watchman, Dan Harper, who, with a fellow security officer, Andrew Church, had discovered smoke pouring from the port and starboard sides of C deck. According to Church, when they returned from telephoning the alarm, "the whole upper deck was a mass of flames."

Unbelievably Rapid Spread

Although the fire was not of the flash type, its extension throughout the entire upper part of the long ship was almost beyond description. Smelling smoke and hearing a commotion, a passenger opened his door. One moment there was smoke in the passageway. Before he could catch up his clothes, fire was cutting off his escape.

Undoubtedly the opening of stateroom and cabin doors and the open windows and portholes gave impetus to the flames, which fed on the carpets and painted trim and combustible construction.

An Ohio woman testified that "the whole top of the ship was aflame before the fire department arrived" and added "I don't see how they saved as many lives as they did."

An Ohio insurance man, who aided in the first attempt to fight the fire in the linen closet, said, when a crew member (bell boy) armed with a small extinguisher opened the door of the locker, it looked dark. There was just a little flame, yellow in color. But, very soon after, while he tried to use a ship's hose, he and the crewman were driven back, and he saw flames heading toward the stern. "They flowed around the corner like a stream of water," he said.[2]

A party of four, playing cards in a room on the dock side of C deck, smelled smoke. There was a linen closet near this cabin and smoke was coming out of it and the cabin next to it. By the time one of the party had run forward to the purser's desk and back, flames were involving C deck, aft, towards the bar.

Confusion—if Not Panic; Many Injured

The rapid extension of the fire, together with the refusal of some of the passengers to heed the warning cries and pounding on doors (several witnesses said they believed this was only some passengers having fun), caught many in their sleeping quarters. Numbers so trapped were suffocated, and burned to death. Some fled the flames in their night attire, many with garments afire.

Under these conditions, it was natural that there would be confusion—even panic. Yet there was no mass exodus or stampede. Many persons were confused in their attempts to find gangways; others headed for the lifeboats. Very few thought to don life preservers, feeling assured that they could escape to the dock. Thus, when forced to go overboard a number undoubtedly drowned. A number of passengers were lost in the effort to return to their quarters for their valuables or clothing. Others were caught as they vainly sought escape in the passageways and corridors. Many dead were found by the life boats.

Although a number of pasengers made the boat deck and attempted to lower the ship's lifeboats, only one of the 16 was swung over. This was done, according to some witnesses, by passengers unaided by the crew. This boat was lowered to the deck railing and filled with people. Half way down, in attempting to lower it further, the falls stuck and the boat reached the water's edge half filled with water. All these passengers were rescued.

Some testimony of witnesses indicates that in certain instances there was intelligent action by crew members to maintain order and direct passengers to safety. A bellboy reportedly acted as traffic officer, directing people to exits. A ship's officer in the bow aided and directed numbers of passengers down life lines and over fire department ladders.

Unfortunately, however, all of these lines except the hausers led to the water —until a quick-witted rescuer managed to locate a raft from which many in the water were fished out and transferred over fire ladders to the pier, while others were able to slide the lines directly onto the raft.

In the frenzied effort to escape through windows and portholes many persons were badly cut by broken glass. According to witnesses, heavy metal screens over all or parts of many windows on upper decks prevented escape by that route. Witnesses told of the effort to kick these screens out, together with the window glass. In a few cases passengers and crew members helped drag trapped victims through these openings to safety.

Many passengers received severe rope burns in their slides down lifelines and hausers.

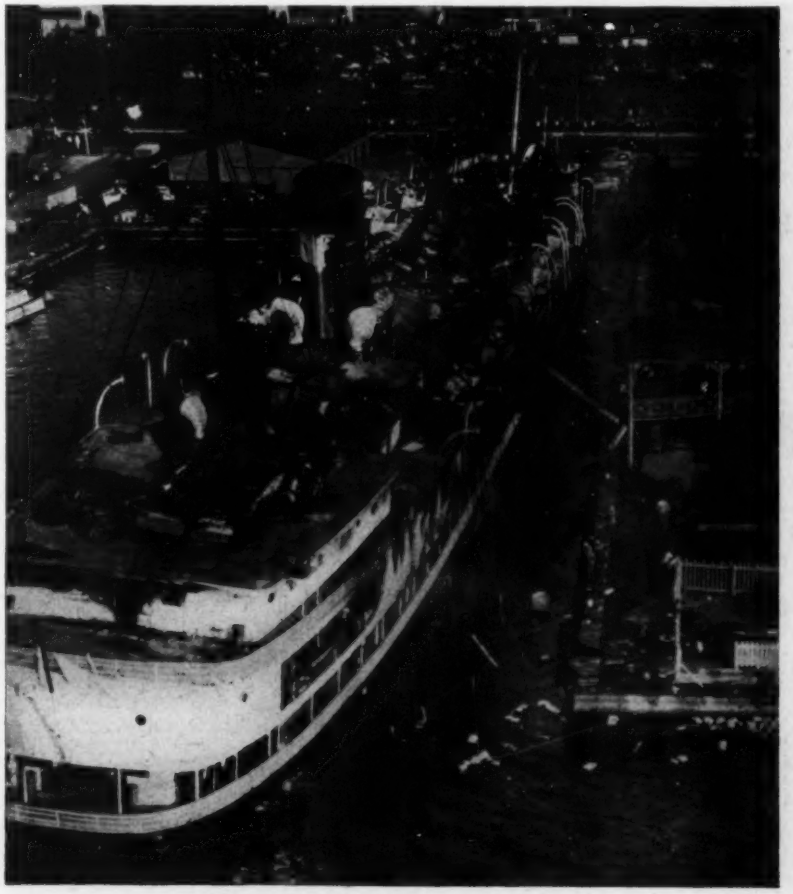
The last two persons believed to have left the vessel alive were first mate Gerald Wood and Boatswain R. D. Morrison. They were taken off over aerial fire ladders from the upper deck.

How the Fire Was Fought

The first alarm of fire was received by the fire department via telephone at 2:38 A.M., September 17. This alarm was sent in by the Canadian Steamship Lines pier watchman from the C.S.L. Office on Pier No. 9.

This brought the following forces, from the Adelaide Street Firehall (142 Adelaide St., just west of York St.): 1 aerial ladder (100 foot); 1 rescue squad truck; 1 pumper; 1 hose truck; 1 high pressure unit and District Chief J. Stevens.

En route to the pier, Chief Stevens saw the ship ablaze and notified the Fire Alarm Office to transmit a second alarm on Box 6 (the Box located on Queens Quay—the nearest to the ves-



Daylight Shows Devastation Aboard S.S. Noronic
Fire controlled, firemen have begun search for victims. Note damage to loading platform (right) and life boat davits swung out on starboard side astern (this was the only life boat launched).

[2]At the Federal hearing September 30 the bell boy, Garth O'Neil, changed his earlier testimony from seeing a "slight haze of smoke" when he went to fight the fire in the linen closet to say that the six-foot wall had been "all covered with fire."

sel). The three top decks of the ship were involved by the time the first forces pulled in. The only sign of life was on "B" deck bow and stern, where people were silhouetted against the flames. Some persons were jumping from the ship at this time.

The second alarm (Box 6) was transmitted at 2:41 A.M., bringing 4 pumpers; 1 aerial ladder (85 foot); 1 city service ladder; 1 fireboat; Chief of Department Peter Herd, Deputy Chief of Department Albert Steen and a district chief. The fireboat Charles Read, which is quartered at the Island approximately 1½ miles distant across the bay from the Noronic, actually had started for the fire before the second alarm on orders from the Fire Alarm Office following notification from the fireboat's station that its watchman could see a fire at the Queens Quay.

At 2:46 A.M., fire department radio was again employed to sound a third alarm, which set in motion 5 pumpers; 2 aerial ladders (one 75 and one 100 foot); 1 high pressure truck and a district chief.

Before this force were in action, the ship was afire from bow to stern and flames were leaping high in the air, threatening the exposed pier and structures.

Rescue Took Precedent

Although there was no delay in stretching in lines to get water on the fire, particularly at bow and stern where people were seen, every possible effort was made to speed the rescue of the unfortunates on the vessel and in the water.

No. 5's aerial ladder, an 85-foot wooden model 18 years old, was run to within 75 feet of the bow of the Noronic and fully extended to the port bow of "B" deck, at an angle of about 25 degrees. In this position it bridged an iron fence, and extended over a part of the slip, to a point where a number of people were awaiting rescue.

At the moment the ladder tip touched the ship, a woman clambered onto it, followed by five or six men. Due to the motion of the ship and the whip of the ladder, under the weight of persons, the tip of the ladder could not be touched down to remain steadily on the bow of the ship. Half way down the ladder, the woman faltered and the men following behind her bunched up. At this juncture the ladder snapped at about the point where it bridged over the fence. All those on the ladder were hurled into the water, but they were all promptly rescued.

Photo Courtesy J. K. Lee

Aerial Ladder Which Broke During Rescue Operations
No. 5's wooden aerial (1931) extended from dock to port bow of Noronic broke under overload, dropping many into bay. All were rescued.

The 100-foot aerial of Ladder 1 (delivered in 1947) had difficulty in reaching the north side of the Quay due to presence of many parked cars. However, right after the mishap to Ladder 5, it was worked to within 90 feet of the bow of the Noronic and extended almost horizontally to "C" deck, at the bow. This metal ladder was braced with a short ground ladder about 15 feet from its base. By its means, firemen were able to reach this part of the ship and aid numerous passengers to the shore and safety. No hose lines were initially taken over this ladder due to the rescue efforts and the fact that heavy hose streams were being put into position to cover that section of the ship from other vantage points.

While Aerials 1 and 5 were engaged in rescue work, all pumpers and the fireboat were in action pouring water into and on the burning vessel. Lines were also laid to protect the exposures from the radiated heat. As it was, a portion of the pier caught fire several times and a sign 100 feet distant was blistered. One pumper was reported to have been caught by the radiated heat and damaged. It had to shut down temporarily until it could be moved.

Not only were the aerial ladders used for rescue, but firemen used wall or hand ladders, extended them from the pier into the Bay—holding them with a fellow fireman on the bottom of each, and in this manner assisted in rescuing scores of passengers who had jumped or fallen from the ship into the water. Other firemen employed the same method to rescue passengers at the stern of the ship. Here, also a number of marine taxi craft were of great assistance in picking up victims who were in the cold water. At times these boats, and the fireboat, were forced to back away from the searing heat of the burning vessel, but they quickly returned to the rescue.

The only effective means of getting water onto the ship from the waterside was from the fireboat. After arriving from her berth on the Island, the fireboat tied up to the port bow of the Noronic and delivered water into the Noronic at close range from a turret nozzle and two single hand lines. Later, just before the vessel listed and leaned toward the dock, Chief Herd ordered the boat to back away. However, still later, when the ship righted herself, the fireboat returned and worked down the port side, operating streams into portholes. The turret nozzle had 1½-inch tip and the two 2½-inch lines each had a 1⅝-inch tip.

Early in the fire the steamers Kingston and Cayuga were both moved from their berths as a precautionary measure. Members of their crews joined in aiding the rescue work on the Noronic and in the adjacent waters.

The fire was under control two hours after the time of arrival of the fire forces, but firemen could not get aboard

Firemen Search for Bodies on Boat Deck
Looking aft toward funnel showing open well and collapse of boat deck onto promenade deck. Note effects of heat on life boats. Time—shortly after 7:00 A.M.

the super-heated hulk until 7:00 P.M. Almost the entire ship was white hot and all woodwork had been consumed and the metal work twisted and buckled.

All told, 20 pieces of apparatus, exclusive of public service trucks, fire department cars, etc., were in operation. These included the following:

10 Pumpers, 833 GPM (Imperial)
1 Hose wagon
2 High pressure trucks
1 Rescue squad truck
4 Aerial ladders (two 100; one 85, and one 75 foot)
1 City service ladder
1 Fireboat (1,000 GPM)

Total amount of hose used was 13,000 feet of 2½-inch and 200 feet of 3-inch.

There were 115 firemen, including 8 officers, in operation; this number includes those who remained over to help remove the dead, after the shift changed at the scene at 8:00 A.M. Firemen worked all day the 18th, removing the bodies from the ship.

There was a total of 555 feet of ladders used and 91 salvage covers with an area of 13,104 sq. ft. The latter were employed to cover the bodies of victims as they were found and removed to waiting ambulances.

The department used 275 Imp. gallons of gasoline and 12 gallons of oil in the operations.

As is indicated on the accompanying diagram (Fig. 1) after all possible rescue efforts had been made, three aerial ladders were used as water towers to direct ladder streams upon the blazing ship. Approximately 15 hose streams were operated on the vessel from the pier.

The following recapitulation of hydrants and hose layouts may be of interest to those who desire these data.

Number of hydrants used, 6. Location of hydrants: 2 2-way Domestic, on C.S.L. Pier 9; 1 2-way, on Queens Way opposite No. 8 Pier; 1 2-way, on Bay St. 1st. north of Queen's Quay; 1 2-way, at northwest corner Queen's Quay and Yonge St., and 1 3-way, north side of Queen's Quay between Bay and Yonge.

Approximate pressure available (hydrant): average 85 lbs. Hose was 2½-inch with 1⅛-inch tips.

The number of Suction Lines employed was 6. Location of pumpers drafting; 3 on east side Pier No. 8; 1 on south side Queen's Quay; 1 on south side Pier No. 9. The fireboat operated on the port side of Noronic. (Distance from east side of No. 8 Pier to port side of Noronic was 120 feet.)

Size of hose and nozzles used by pumpers: 2½-inch hose, single lines, straight Underwriters' branches (nozzles) 1⅛-inch tips.

Size of hose used by fireboat: 2½-inch turret nozzle, 1½-inch tip and 2 single lines, straight 1⅛-inch tip.

Total number of lines laid: 37. Gallons of water used (Imperial): 1,719,312.

The fire was "struck out" Sunday, Sept. 18 at 4:51 P. M.

Whole City Mobilized

As the gravity of the disaster became apparent, Toronto's emergency forces, police, Red Cross, Salvation Army, first aid, utility and other forces, as well as the fire department, swung into action. Within an hour more than 1,000 firemen, police and volunteers were in the thick of the battle.

Chief Peter Herd was in command of rescue and fire fighting. Acting Chief Constable M. M. Mulholland directed the police. All available ambulances were dispatched to the scene and over a hundred taxicabs were mobilized; these, with private cars rushed the injured to the city's hospitals. Many casualties received first aid on the pier.

In the early phases of the tragedy, as men, women and children jumped or were pushed over railings or struggled to work their way down mooring and life lines there were only a handful of firemen, some scattered crew members, boatmen, taxi drivers and police to perform rescue and get order out of chaos. Their efforts saved many lives. Life preservers, tin cans and lengths of wood were thrown out from shore. A number of rescuers were injured when they kicked in metal screens, window slatted blinds and glass to reach victims. Many more were saved by rafts, fore and aft, manned by dripping, half-naked police officers and volunteers. Water taxis went in close to the burning hull, picking people out of the water. Firemen smashed portholes and other openings to get to trapped passengers and get added reach to streams. Doctors, nurses and first aiders arrived as if by magic.

Photo Courtesy Toronto Fire Dept.

One of the Noronic's Fire "Hydrants"
Fire line riser, valve, spanner (on chain) and portion of burned single jacket hose on port side.

As the injured were sped to hospitals, the unhurt survivors were taken to hotels. The dead were removed to the city morgue. Later, when this proved inadequate for all the victims, the Horticultural Building at the Canadian National Exposition was used for this purpose.

As the news spread, by daylight crowds of the curious jammed the area, but were controlled by extra details of police who also cleared the way for the numerous emergency vehicles transporting the injured and dead.

The telephone company's switchboards were jammed with calls; fire, police departments, newspaper offices and other agencies were bombarded with inquiries and had difficulties getting through their own emergency messages.

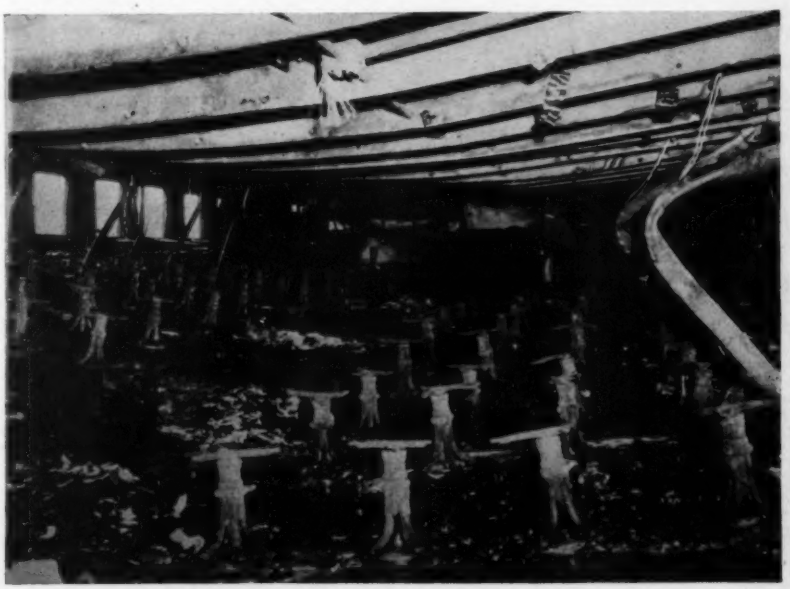
The Salvation Army and the St. John Ambulance Brigade took on much of the burden of caring for the rescued, most of whom lost all their clothing and belongings. These agencies, with police, Red Cross and other services, handled the tragic details of identifying the dead and missing.

The Salvation Army workers were among the first on the quay, and first to go aboard the ship with firemen and police. They prepared the initial lists of survivors. A St. John's staff of over 300 served for days following the catastrophe, providing clothing and otherwise aiding the survivors, who were almost unanimous in their praise for the prompt and efficient manner in which relief was provided.

Half an hour after the fire department had gone to work, members of Toronto's Box 12 Club—the organization of the city's fire buffs, were on the scene. For the first time since the fire department had given the Club its canteen truck, the members were able to put it to good use.

On the dock the buffs dished out 25 gallons of coffee as well as uncounted

(*Continued on page* 821)



Ruins of Ship's Dining Room on Observation Deck
Only the metal table supports of the dining room tables, metal floor and ceiling beams were left. Note effect of heat on floor beams and stanchions.

I.A.F.C. Considers Defense Against Atomic Hazards

Seventy-Sixth Annual Conference Hears New Head of Federal Civilian Defense Activities Discuss Mutual Cooperation

A STAFF REPORT

EACH year in reporting the annual convention of the International Association of Fire Chiefs there is an urge to follow the precedent of reporters of yesteryears and refer to the gathering as the "biggest and best ever." This is a perfectly natural aftermath of conventions that are outstanding among conferences of and in the fire service.

That urge persists as we review the 76th Annual Convention of the IAFC, held in New Orleans last month. It belongs in the "outstanding" category. In attendance there have been larger gatherings; there may even have been some with heavier business and recreational schedules. But those who enjoyed the hospitality of the Crescent City, September 26 to 29 inclusive, and who partook of the business sessions, will agree that it was a good investment in time and expense.

With registration over the 1,300 mark, and with heavy delegations from below the Mason and Dixon Line, the Convention got off to a good start Monday, September 26, with President Henry R. Chase of Miami, presiding. Business meetings were held, and exhibits were located, in the spacious Municipal Auditorium.

Chief Chase called the Convention to order Monday morning, after which the Invocation was delivered by Reverend L. R. Shelton, First Baptist Church of Algiers, La.

Next came the singing of the national anthem, following which the officers of the Association and distinguished guests were introduced to the delegates. Included in these introductions were Bernard J. McCloskey, Commissioner of Public Safety and the host chief, Howard L. Dey of New Orleans.

The delegates were officially welcomed to New Orleans by Commissioner McCloskey in a spirited address, which was responded to by Chief John Alderson of Los Angeles, second vice-president, speaking for the Association. The address of Chief Henry Chase, of Miami, president of the Association, which followed may be said to have set the keynote for the Convention.

President Chase reminisced a bit, and exhorted members of the Association to maintain the progressive momentum which has been shown by the fire service in the past few years. It is time to forget old ways and old ideas, he pointed out, and adjust our methods and facilities to the swift tempo of the times.

The impressive memorial services for the departed members of the Association were conducted by Reverend Joseph Laux, OMI Chaplain, New Orleans Police and Fire Departments, after which the delegates adjourned to witness the noonday parade of firefighting elements of the New Orleans Fire Department which passed in review at the Municipal Auditorium.

Monday's afternoon session opened with the routine business of the reading of minutes and communications, appointments of committees for the convention, reports of the secretary-treasurer, auditors, general manager, divisions, committees.

Photo by Hugh Walker

New Orleans Fireboat Puts on a Show for Conference Guests Who Are Aboard the S.S. President

Photo by Hugh Walker

Newly Elected Officers of the I. A. F. C. Left to Right: Chief Daniel B. Tierney, Secretary-Treasurer; Chief Rudolph H. Swanson, Second Vice-President; Chief William J. Cawker, President, and Chief John H. Alderson, First Vice-President

Considerable interest was shown in the report of Chief Daniel B. Tierney, the secretary-treasurer of the Association, whose annual financial statement was also the topic of discussion by the Board of Directors at its meeting held on Sunday, prior to the opening of the Convention. The income and outgo of the Association has always been a subject for consideration and this year the Board of Directors devoted considerable time to weighing the financial status of the organization and evaluating its services to its members and the possibilities of expanding its functions.

The activities of the headquarter's office and staff were reviewed by James E. Jagger, general manager.

The reports of the divisional organizations showed a healthy condition in almost every locality, with a number recording gratifying gains in membership.

Of the committee reports, that of the Exhibit Committee Chairman showed a total of 39 exhibitors for the 1949 Convention as compared with 42 in the previous year. The report of the Committee on Communications, Chief William J. Cawker, first vice-president, Chairman, was devoted largely to the important developments in the field of radio communications, with emphasis on allocations of frequencies under the rule of the Federal Communications Commission released earlier this year. The Committee recommended the endorse-

HIGH POINTS OF THE I. A. F. C. 76TH ANNUAL CONFERENCE, SEPTEMBER 26-29, NEW ORLEANS, LA.

Registration: **Approximately 1300 including fire officers and guests from Puerto Rico, Canada and U. S. Possessions.**

Technical and Educational Sessions: **Two dozen topics bearing on fire protection were discussed in 15 sessions including Thursday's Round Table.**

Exhibits: **Manufacturers' exhibits totalled 39.**

Entertainment and Recreation: **"Open House for all delegates and ladies throughout the convention. Boat rides and sightseeing trips. Parade by New Orleans Fire Department.**

Resolutions: **Several of importance including "uniform marine disaster signals" and careless handling of matches and cigarettes.**

New Officers:

Pres.: William J. Cawker, Topeka, Kans.
1st Vice-Pres.: John H. Alderson, Los Angeles, Cal.
2nd Vice-Pres.: Rudolph H. Swanson, Jamestown, N. Y.
Sec.-Treas.: Daniel B. Tierney, Arlington, Mass.:
Exec. Secy.: Jay Stevens, San Francisco, Cal.
Technical Advisor: Fred Shepperd, Fire Engineering.

1949 Convention City: **San Francisco, Cal., September 12 to 15.**

ment of the Frequency Assignment Plan for Fire Radio Service such as has been accepted for the State of Pennsylvania and is under advisement in other States. This Plan has already received the endorsement of the Eastern Association of Fire Chiefs and tacit approval of other groups. Chief Cawker stressed the importance of members of the International making their applications for radio frequencies which are presently available to small communities as well as largest cities. The technical advisors of the Association, appointed by President Chase and Chairman Cawker, on recommendation of divisonal officers are proving effective aids in assisting chiefs to secure satisfactory installations, and their continuance in office is ureged.

The newly-appointed "Committee on Cooperation With the Signalmen's Association," Chief Roi B. Woolley Chairman, reported progress in bringing about closer relations between fire chiefs and communications heads and also urged endorsement of the statewide plan of frequency allocations. This committee works with a similar committee of the International Municipal Signalmen's Association, headed by Superintendent of Communications, Herbert A. Friede of Washington, D. C., in matters of mutual interest. Shortly, the IAFC will be asked to study suggested revised specifications for fire alarm boxes now being prepared by the I.M.S.A.

A report was also received from the President's Advisory Committee, Mr. Fred Philbrick of the Gamewell Company, Chairman. The latter reported on manufacturers' cooperation with the Association—which reached a new high during the year. The committee on Credentials, Chief George McAlpine Chairman, and Courtesies, Chief Selden Allen, Chairman, reported progress.

Technical Session Popular

The opening techincal sessions proved popular and were well attended. The first speaker, Ed. Hilton, Executive Director National Automatic Sprinkler and Fire Control Association, took for his topic "Protection of High Value Areas." He said fire defense should be everybody's business under the fire chief's leadership. He childed those chiefs who had not joined the Association and urged greater attendance at Association conferences. He recommended that chiefs study the plan developed by the U. S. Chamber of Commerce for protecting high value districts. This 22-page plan upon application and three other publications can be had of Mr. Hilton's Association. The others available on request are: "The Sentinel on Hospital Fires and What to do"; "Why Unsatisfactory Sprinkler Fires?" and the "Monthly News Bulletin."

The topic "Cotton Fires and Their Control" was reviewed by Chief Connie O'Sullivan of the Memphis, Tenn., Fire Department, who is eminently qualified to speak upon the subject. The program of controlling cotton fires, he said. should start with the cotton gin; then it should consider cotton in storage. In this connection Chief O'Sullivan laid down twelve rules to safeguard cotton storage. These included (1) proper construction; (2) automatic sprinklers protection; (3) ample water supplies; (4) ample first aid fire fighting equipment; (5) good watchman service; (6) good fire fighting organization; (7) removal of causes of fires in cotton storage; (8) good maintenance of all fire equipment; (9) good housekeeping; (10) good electrical maintenance; (11) proper supervision of plant and (12) compression of bales.

Chief William Connelly of the Syracuse N. Y. Fire Department, explained the "Pupil Fire Safety Patrol" which has been participated in by over 30,000 city school children and an additional 15,000 county children of his area. The idea calls for organizing fire safety patrols in all schools, with a "chief" and officers, heading various school safety activities, such as evacuation, fire prevention and so on. Certificates are awarded the officers for their accomplishments.

The subject of "Large Pumpers and the Water Systems" was handled by Chief George S. Lockhart, Minneapolis, Minn., Fire Department. He explained his reasons for installing 2,000 GPM pumpers and gave details of his apparatus design, construction and operation. Oversize pumpers, which are also used by some large cities, afford greater attack power, he said. "If high pressure systems and fire boats have advantages because of their capacities and ability to service a large number of hose lines, then it seems the same argument can be applied to large capacity pumping units." Chief Lockhart emphasized the importance of having ample water supplies available wherever such large capacity units are employed.

Boat Ride on Tuesday

Technical sessions resumed Tuesday morning with vice-president Cawker presiding, and with a heavy array of talent. The topic "First Aid Programs in the Fire Service" was discussed by

Photos by Hugh Walker

Top: Some of the New Jersey Delegation in Attendance at the New Orleans Conference. Bottom: Group of Southwestern Members Aboard the S.S. President: Left to Right: Chief E. W. Gaston, Eldorado, Tex.; Chief G. R. McAlpine, Oklahoma City; T. A. Rosenwald, Albuquerque, N. Mex.; Chief H. H. Tadlock, Port Arthur, Tex.; J. E. Hurley, Little Rock, Ark.; Chief D. P. Rachel, Port Arthur, Tex.

Photo by Hugh Walker

Missouri Valley Fire Chiefs and Wives Stage a Get-Together Aboard the S.S. President

Carl J. Potthoff, M.D., National Director of First Aid and Associate Medical Director, American Red Cross, Washington, D. C. He dwelt at length upon mortality statistics. He urged fire departments to train their men carefully. He explained the functions of the Red Cross and suggested that fire departments remember the need of good first aid in civil defense.

"Problems We Face in Operating on Airport Fires" by Chief George R. McAlpine, Oklahoma City, Okla., offered the realistic, forthright viewpoint of a fire chief who has had first hand experience with the subject. Briefly, Chief McAlpine recommended study of the problems by the fire chief; placing himself on record following inspections and recommendations. He offered five personal recommendations: (1) Rigid inspections of all airports, with subsequent corrections; (2) necessary equipment and personnel for adequate fire protection; (3) that the fire service quit "kidding itself" on its ability to dispatch fire forces several miles and adequately handle aircrash fires; (4) elimination of low flying over cities and (5) cooperation of military authorities in permitting emergency landings on military airports where fire control facilities are available.

John A. Neale, Vice-President and Chief Engineer, Underwriters' Laboratories, spoke on "Testing and its Place in the Fire Service." He emphasized the strides made in fire apparatus and equipment and the need of keeping abreast of changes by test and trial. He covered a wide range of topics, including all types of modern hazards, and the newest extinguishing agents. Television, building supplies and materials, chemicals, gases, electrical and other hazards were reviewed in the light of modern extinguishing agents such as wet water, inert gas extinguishers, and so forth.

The recently adopted Fire Service Act, now a law in the Dominion of Canada, whereby the fire service of Dominion communities receives financial aid of the government, was interestingly described by Dana Porter, K. C., Ontario Attorney-General.

The morning's session concluded with a paper by Fred B. Philbrick on the "New N.B.F.U. Fire Alarm Regulations." This detailed the recommendations of the Signalling Committee on a wide range of factors, many highly technical, including number of fire alarm operators, overhead vs. underground circuits and the elimination of delayed alarms.

Tuesday afternoon was given over to a sightseeing trip on the Mississippi River, aboard the S. S. President. The delegates were greatly interested in the city's "new old" water front, with its mixture of ancient fire hazards, and modern warehouses and other structures.

Wednesday Has Heavy Program

Chief John Alderson, second vice-president, presided at the Wednesday technical sessions. The opening speaker, Chief Raul Gandara, Insular Fire Service of Puerto Rico, took for his subject "Making the Fire College an Effective Medium of Instruction." He stressed the value of practice and experience in making good firemen, but pointed out a man having a solid theoretical basis can become a good fireman qiucker than a man without basic knowledge, which can best be obtained at a Fire College, of which he said, there are too few in the United States. He then retailed his own experiences, and those of Puerto Rico's fire service in promoting training in firemanship.

Photo by Hugh Walker

Canadian Contingent Pose for Picture, Following the Annual Banquet, in Grand Ballroom of Hotel Roosevelt

An interesting description of how a small volunteer fire department is organized and administered was given by Chief John Dahmer of the Ponchatoula Volunteer Fire Department, Ponchatoula, La. He laid emphasis on the importance of the selection of men and their training, rather than the number of personnel in the department.

"What We Learned About Tire Storage Fires" was the topic discussed by Norman J. Thompson, Director, Factory Mutual Laboratories, Boston, Mass. Public fire departments, he said, aided in extinguishing 21 per cent of all fires studied by his organization, the other 79 per cent being extinguished by automatic sprinklers or use of first-aid equipment. He explained the tests conducted by the Laboratory in extinguishment of fires in stored tires. "I cannot resist

Photo by Hugh Walker

Aboard the S.S. President on the Cruise Around New Orleans Harbor

Left to right: Chief Tom Lane, Alameda, Cal.; Mrs. Tom Lane; Mrs. L. C. Canning and Chief Lloyd C. Canning, Midvale, Utah.

taking advantage of this opportunity, he said, to stress the importance of advanced planning for fire fighting and fire protection both on the part of plant management and the Public Fire Department."

In view of the agitation over the hazards—real or imagined, of Christmas tree ornaments, and the history of last year's holiday fires, the talk by Joseph

Photo by Hugh Walker

Assistant Chief William Ferrie and Battalion Chief Emmet H. Byrne, of Cleveland, Ohio, Relaxing on Their Sail Around New Orleans Harbor

Ward, Executive vice-president, Noma Electric Company, had special significance.

Mr. Ward's topic was "Fire Hazards of Plastic Illuminated Christmas Tree Ornaments."

He traced the history of plastic tree ornaments and recited the fairly recent experiences of some fire chiefs who encountered ornaments that smoked and melted. Then he told how the industry had investigated these cases and the resulting tests that were made to determine the causes of the conditions. These tests, conducted by the leading test laboratories—including the Underwriters' Laboratories; showed that modern American plastic illuminated ornaments are free from fire hazards. He told about the new self-extinguishing type plastic on which the flame goes out when the lit match is taken away, and which is the result of fifteen years experimentation and research.

Another topic of widespread interest to the fire service was discussed by William A. Gill, Coordinator of Civil Defense Planning National Security Resources Board, Washington, D. C. His subject was "The Status of Civil Defense from the Federal Viewpoint." In it he traced the progress made, the difficulties under which civil defense planning had to function, and the part played by the fire service in the national security picture.

The entire afternoon was given over to a Round Table discussion of a number of subjects, with Chief Alderson presiding. This feature proved one of the most popular of the conference sessions and was participated in by a number of fire chiefs and guests.

Under the adroit direction of the chairman, nearly every one of the seven topics scheduled for discussion was reviewed and considered. The subjects scheduled for the Round Table included self-service dispensing of gasoline; operating on basement fires; wetting agent; high and low velocity fog; industrial plant protection; fire department radio communications and inspection of fire apparatus.

Open House Popular

Throughout the entire convention from noon until 11:00 P.M. open house for all delegates and guests, was maintained in a building on corner of St. Claude and Dumaine Streets, one block from the Municipal Auditorium. Here the delegates and their friends gathered for refreshments and that chief pastime of many conventioneers—the "bull sessions."

The Ladies Program and Banquet

No effort was spared to entertain the distaff side of the convention. Beginning Tuesday, the ladies had a nearly continual round of entertainment, including a Tuesday luncheon, the sightseeing trip on the river in the afternoon, another luncheon on Wednesday, followed by a sightseeing tour through old and new New Orleans, and their participation in the annual banquet on Wednesday evening.

Many visiting chiefs joined their ladies in conducting their own tours of the city's historic old quarter, the restaurants, shops, and stores and places of interest.

The banquet, held in the main ballroom of the Hotel Roosevelt, was well attended and the scene of fraternal gaiety such as only a fire chief's convention can produce.

Thursday's concluding sessions were as is custom, given over to more routine matters of the Association and the convention.

I.A.F.C. Honors Fred Shepperd

Fred Shepperd, Editor of FIRE ENGINEERING, was the honored guest at the Association banquet on Wednesday evening at which time he was presented a beautiful gold, split-second strap watch and a bronze plaque.

The presentation was made by President Henry Chase, who in a few well-chosen words, referred to the many

Plaque Awarded to Fred Shepperd

years of service given the Association by Fred Shepperd in his capacities as Headquarters Manager, Engineer Manager and Technical Advisor.

The citation on the plaque reads: "To Fred Shepperd, in recognition of his distinguished and untiring efforts in behalf of the International Association of Fire Chiefs and of his forty years of outstanding leadership in the scientific advancement of the fire service. Presented by the International Association of Fire Chiefs at its 76th Annual Conference, New Orleans, La., September, 1949."

(*Continued on page* 819)

Photos by Hugh Walker

Left: A Presidential Group at the New Orleans Conference. Left to Right: Chief Henry R. Chase, Retiring President; Mrs. Henry R. Chase; Mrs. W. J. Cawker and Chief William J. Cawker, Newly Elected President. Center: Chief and Mrs. Barney J. Houston, Cincinnati, Ohio, Receive a Toast on Their Thirtieth Wedding Anniversary. Right: The New Second Vice-President Is Ably Escorted. Left to Right: Mrs. C. A. Delaney (Wife of Past President Chief Charles A. Delaney), Chief Rudolph H. Swanson and Mrs. Swanson

UNUSUAL INTERNATIONAL FIRE POSES PROBLEM IN CONTROL

Blazing Gas Main on Peace Bridge Gives Buffalo Firemen Long, Hard Battle

By Paul C. Ditzel

Editor's Note: **The press of Thursday, July 7, carried a tiny news item to the effect that an "insignificant fire" on the Peace Bridge, connecting Canada with the United States, had been extinguished with trifling loss. But like many another fire which received scant attention in the press and radio, this "insignificant" blaze produced problems in control and extinguishment out of all proportion to its size, and the damage done by the fire.**

Not only was the Peace Bridge fire out of the ordinary in that it actually took place on the boundary line of two nations, but it brought response from the fire departments of two countries, and in order to control it, Buffalo firemen had to literally straddle the boundary line and operate "internationally."

AN unusual fire, which occurred simultaneously in the United States and Canada, damaged a 12-inch gas main under the superstructure of the famous Peace Bridge, a connecting link between Buffalo, N. Y., and Ft. Erie, Ontario, Wednesday evening July 6.

The blaze originated at a leaking 18-inch expansion joint on the Canadian side of the bridge, 28 feet West of the International Line, near an expansion joint of the bridge superstructure. The Canadian-American boundary is marked on the bridge.

The Peace Bridge was built in 1927. The 22-year-old structure is of steel and concrete construction and has five arch and one truss spans. It was constructed over the Niagara River and Black Rock Channel to commemorate peaceful relations between the United States and Canada.

There is a six-foot-wide sidewalk on both sides of the East-West bridge, and a 36-foot wide roadway. The gas main was located directly underneath the sidewalk on the South side.

Gas pressure is maintained by the Iroquois Gas Corporation of Buffalo as a supplementary supply to the Provincial Gas Company, a National Fuel Company subsidiary, which supplies Ft. Erie, the Western terminus of the bridge, and Niagara Falls, Ont.

Whenever Provincial Gas Company pressure falls appreciably the supplementary supply from Buffalo automatically takes effect. Gas officials estimate that 5,400 cubic feet of gas at 16 pounds pressure was in the main at the time of the fire. However, there was no gas flowing after 8:15 o'clock the night of the fire.

The 3,600-foot long supply pipe line is constructed of 20-foot lengths of seamless steel tubing strapped to the top of steel "I" beams, three feet in from the South side of the bridge. The lengths are connected by Dresser couplings about 10 inches long. Rubber gaskets, triangular in shape, expand and contract with the sway of the bridge and temperature changes.

Two valves in series control the flow of gas on the Buffalo side and an eight-inch check-valve controls the flow toward the Ft. Erie side. The gas can flow in only one direction—from Buffalo to Ft. Erie.

Officials have been unable to determine exactly how the seeping gas was ignited. It may have been started by a discarded cigarette, an automobile backfire, or children playing with firecrackers. Fireworks are forbidden in Buffalo but have been brought back to the United States from Canada where their sale is legal.

The fire melted off rubber gaskets and increased the discharge of gas. The heat ignited gas at three couplings on the American side of the fire and two other couplings in Canada. Together with the blazing gas at the original expansion joint, there were six visible fires.

The Buffalo Fire Alarm Office sent Engine Company 2, to the Peace Bridge after off-duty Fire Captain Leo. J. Sheehan telephoned at 11:07 P.M. that he could see a glow underneath the bridge. He was in his car on the American side and about 2,000 feet away from the fire.

Engine 2, which coincidentally is Captain Sheehan's own company, responded with four men. The Captain boarded the rig when it arrived and went with it onto the bridge and to the fire scene.

Initially, firemen pried open a telephone-line manhole cover and discharged a booster line through the manhole. When fire was observed coming up through one of the bridge scuppers—an opening in the bridge roadway which permits rainwater to run off—Captain Sheehan used a Buffalo police car radio to request a truck company and battalion chief.

Before this additional apparatus arrived, the blaze had spread to gas leaking at five other joints in the main.

Additional Help Called

At 11:20 P.M., a full assignment was ordered and the alarm office struck Box 614 at Busti Ave. and Vermont St. At the time, however, some of the apparatus due to respond was occupied at a nearby fire. Four large lines were in operation at a grocery store and apartment house blaze. Therefore more distant companies were forced to cover in.

The box alarm brought two additional engines: 13 and 16; Ladder 2, and Battalion Chief 1. Acting Deputy Fire Commissioner Robert J. Zahm, Jr., responded soon after from the grocery fire. He was followed by Fire Commissioner Joseph S. Masterson and Superintendent of Apparatus, George A. Leo.

Engine 16 was forced to drive to the Canadian side of the bridge and turn around. The bridge roadway, only 36-feet wide, is too narow to permit fire apparatus to swing around on the bridge. The engine then laid a line of 25 lengths of 2½-inch hose from the fire toward the American side.

Engine 13 dropped its line off where 16's ended and stretched its complete bed of 25 lengths from that point to where Engine 16 had taken a position at a fire hydrant near the Buffalo side of the bridge. Engine 16 began pumping at from 200 to 300 pounds pressure, but was forced to reduce it when a section burst.

Deputy Commissioner Zahm radioed for Auxiliary No. 2 at 11:52 P.M. This unit arrived with an electric hammer. Using a star drill, the hammer smashed six holes in the four-inch steel-reinforced concrete sidewalk at the approximate points where the six fires were burning.

A detail from the Ft. Erie Fire Department responded but found the blaze was being handled by the Buffalo Fire Department. It returned to its quarters soon after.

At 11:55 P.M. an emergency crew from the Iroquois Gas Corporation was able to shut off the two valves through which gas flowed over the bridge.

Iroquois Gas Corporation officials ordered the Provincial Gas Company in Ft. Erie to be notified, but the fire had burned through a long distance telephone cable containing 264 pairs of wires connecting Buffalo and large Canadian cities. Therefore in order to notify them the phone message had to be routed via Montreal to Ft. Erie. However, Manager Glenney of the Ft. Erie Company already had seen the blaze and shut off the control valves. The cable was not placed back in service until the following afternoon.

At the height of the blaze, flames stabbed up through the manhole cover and the six sidewak openings. Fire also shot up through nearby scuppers and up and over the bridge railing. Fortunately there was no fuel for them to feed upon.

The glow illuminated the swift-moving current of the Niagara River and attracted many passersby who lined the Buffalo and Ft. Erie shores to watch fire operations. The blaze was brought under control after 1 A.M. Thursday morning. There were no injuries.

After inspecting the bridge the following morning, Edward P. Lupfer, president of the Edward P. Lupfer Corporation, the engineer who built the bridge, reported the structure itself was undamaged.

"Outside of scorching of structural steel under the sidewalk, no damage was done. And there was no weakening of the structural steel," he said.

Bridge, gas, electric, and telephone officials figured damage at several thousand dollars. Walter M. DeLaPlante, bridge manager, said the only repairs necessary would be repainting of the scorched steel and relaying of the sidewalk where holes were cut to repair the gas, electric and phone lines.

Electric and telephone crews completed repairs within 24 hours. But the gas main was not replaced in service until August 10—more than a month later.

During the fire, traffic over the bridge was halted for two hours and then allowed to resume on a restricted basis. Normal traffic was resumed after 3 o'clock Thursday morning.

DOMINION FIRE CHIEFS HOLD BUSY CONFERENCE IN OTTAWA

Ottawa Fire Department Host to Record Breaking Attendance of Delegates and Guests

A Staff Report

THE forty-first annual Conference of the Dominion Association of Fire Chiefs was held in Ottawa, Ont., August 29 to September 1 inclusive. Headquarters were at the Chateau Laurier, with a record breaking attendance and a business and tentertainment program which kept the delegates and guests on the jump.

Host Chief Gray Burnett and President Chief Charles Vince of Guelph, opened the Conference in the spacious Auditorium of the beautiful Chateau. Following singing of the British and American national anthems, Honorary Deputy Chiefs Rev. Serson Clarke and Rev. Father T. J. Deschamps, fire department chaplains, bestowed their blessings on the Conference delegates and their wives.

Chief Burnett introduced Mayor E. A. Bourque of Ottawa who extended the gretings of the City. He was thanked by Chief R. McRonald of London.

An impressive choral ceremony commemorating the deaths of the Association members featured the opening session. Eleven surpliced boys stood beside a white cenotaph draped with a fire chief's white coat and helmet in front of the speaker's platform, as a background trumpet blew "Last Post" and "Reveille," while Chief Vince laid a wreath at its base. The ceremony concluded with the St. Luke's Anglican church boy choirsters singing "Abide With Me."

Inclement weather caused postponment of Ottawa Fire Department's Monday parade until the following day. Meanwhile, the business sessions got under way, to continue until Friday.

Following President Vince's address in the afternoon, James E. Jagger, general manager of the International Association of Fire Chiefs, brought the delegates felicitations from Chief Henry Chase, IAFC president, whose attendance was frustrated by the Florida hurricane. The first discussion entered into by a number of delegates, concerned the hazards of insulation and fibre board. The next speaker, Fire Marshal William J. Scott, went at length into the details of the Ontario Fire Department Act of 1949. The delegates then journeyed to the Exhibition Grounds where the Ottawa Fire Department and equipment manufacturers jointly staged a spirited demonstration of fire apparatus and extinguishing equipment. In the evening a stag was held in the Assembly Exhibition Grounds.

Tuesday saw the Ottawa Fire Department parade in all its glory, headed by the famous R. C. Mounties band. Sessions included addresses by F. X. Ahern, Deputy Fire Commissioner, Quebec City; D. T. Hewson, National Research Council (Oil Burners), and G. H. Dixon, Institute of Plumbing & Heating, Montreal (Safety in Domestic Heating.) The nomination of officers was first on the afternoon agenda, with lectures on Tempered Plate Glass, by District Chief A. McFadden, Ottawa Fire Department; Liquified Petroleum Gases, by W. H. Merrill, Department of Mines and Resources, and Petroleum Industry Production and Handling, by a representative of Imperial Oil Ltd.

Urges Better Public Relations

The hit of the afternoon was a spirited address by Rev. Michael Collins, Marblehead Mass., who urged the fire fighters to put their best foot forward, and do a better job of "selling" themselves and their service. At this session John Redmond, president and George Richardson, secretary-treasurer, International Association of Fire Fighters were introduced and spoke briefly. Later a tour of the City's beauty spots was conducted concluding with the delegates being taken to the Armories, Hull, P. Q., where they enjoyed refreshments and entertainment as guests of the manufacturers.

Wednesday forenoon's sessions opened with a talk on Fire Fighting is Big Business by Chief Roi B. Woolley, Assistant Editorial Director, FIRE ENGINEERING, followed by papers by Carl Caskey, Ontario Fire Marshal's Department on Cigarette Fire Hazards and on the Characteristics of Fire, by Dr. C. D. Niven, National Research Council.

The afternoon sessions opened with the election of officers, and a discussion of Fire Prevention Bureaus, by personnel of the Ottawa Fire Department. This was followed by addresses on: Common Fire Hazards by J. N. Pryce, Canadian Underwriters' Association, and Fire Department Administration, by Chief D. Clawson of Winnipeg.

Banquet an Outstanding Affair

In the evening the Convention banquet was held in the Chateau Laurier ballroom, with approximately 1,000 in attendance. The speakers were Rev. Father Collins of Marblehead, and T. Alfred Fleming, National Board of Fire Underwriters, New York. The banquet concluded with entertainment by guest stars.

Photo Courtesy Ontario Fire Marshal's Office

New Officers of the Dominion Association
Front row (left to right) are Chief R. C. McRonald of London, Ont., President, and Chief W. H. Short of Lethbridge, Alta., First Vice-President. In the back row are Chief Allan H. Clark of Lakefield, Ont., Secretary-Treasurer, and Chief Secord Robinson, of Kapuskasing, Ont., Second Vice-President.

The final day, Thursday, was ushered in with an address by A. L. Ham, Dominion Board of Insurance, Montreal, on Fire Protection Equipment - Re-Insurance Canadian Underwriters'. He was followed by J. K. McElroy, National Fire Protection Association whose subject was Hospital Fires, and D. B.

Photos Courtesy Ontario Fire Marshal's Office

Left: Outgoing President, Chief Charles Vince of Guelph, Ont., extends best wishes to the new President, Chief R. C. McRonald of London, Ont. Center: Fire Marshal W. J. Scott of Ontario, Major General E. F. Worthington, Civil Defense Coordinator for Canada, and Commander Harry Arbick, Royal Canadian Navy, on loan to the Office of Civil Defense. Right: When the Dominion Association of Fire Chiefs last met in Ottawa in 1915, those attending included just two who are still active fire chiefs in 1949. They are Fire Chief Robert P. Dey of Pembroke, Ont., 1948 winner of the King's Medal for outstanding bravery (who was this year presented with a traveling case by the Association), and Fire Chief Andrew Spalding of Preston, Ont. Both are past presidents of the D. A. F. C.

Photos by Hugh Walker

Ottawa's Simulated Vamps Have "Mustache Trouble"

Highlighting the striking parade of the Ottawa Fire Department before the delegates and guests was the showing of fire equipment of yesteryear—pulled and pushed by red shirted, be-mustached (when the breeze didn't will otherwise) Ottawa Firemen.

Rees, Department of Transport, who spoke on Airplane Fires. Superintendent F. G. Vivian, St. Johns Fire Department told about the Newfoundland fire service.

Taking for his topic Civilian Defense in Canada, Brig. F. F. Worthington, Director of Civil Defense for Canada spoke on necessity of better fire defense in war time and showed pictures of cities bombed in the last year. He was followed by Jim Arnott of Wilson & Cousins, Toronto, whose subject was Standardization of Hose Threads, after which the new officers were installed, and Victoria selected as the location of the 1950 Dominion convention.

For those delegates who chose to remain over until Friday's special treat was given in the form of the "March of Research"—the electrical demonstration, staged by Dr. R. Hitchcock and his staff from Westinghouse Electric Company, Pittsburgh.

The Distaff Side

Dominion conferences have always been outstanding in one way, at least—that is the large attendance of the fair sex. This year was no exception and to keep the ladies happily busy, the City of Ottawa and its gracious fire force, offered a program that included shopping, sight-seeing tours, to the Mint, Parliament Buildings, Dominion Archives, and teas, fashion shows and more. The ladies were also invited to the Armories entertainment, and the banquet.

On Wednesday, some 200 of them attended a special luncheon in the Quebec suite of the Chateau Laurier, arranged by the Ladies Auxiliary of the Dominion Association of Fire Chiefs. Mrs. Charles Vince, wife of the retiring president of the Association, was presented with a special gift. Mrs. H. J. Morningstar, wife of Chief Morningstar (one of the two chiefs who divide fire fighting responsibilities in the City of Fort Erie, Ont.) was named president of the Ladies Auxiliary.

Important Resolutions

Among the important measures upon which action was requested by the delegates was the elimination of overhead wiring. Delegates unanimously passed a resolution calling upon civic administrations throughout the Dominion to end this "unnecessary hazard" to firemen.

Another measure that received serious consideration is the passage of legislation making it an offense for a person to cause a fire in a hotel room. A resolution to that end was passed unanimously. The convention also asked the federal government to outlaw manufacture of cigarettes containing saltpetre or other properties in the cigarette paper or tobacco that increases the burning properties of a cigarette.

Chiefs also want legislation to eliminate the hazards of open-flame candles in churches and other places of public assembly, and they would have all hospitals equipped with automatic fire detection and sprinkler systems, connected with fire department alarm systems.

Climaxing an outstanding career in fire fighting, Chief Robert Dey of Pembroke, Ont., received from his fellow fire chiefs of the Association the gift of a handsome traveling case. It will be remembered Chief Dey received the King's Police and Fire Medal—the fireman's Victoria Cross, in 1948 when he risked his life to save that of a Pembroke child. The presentation was made by Chief Charles Vince, president, in behalf of the Association.

The New Officers

In the Tuesday sessions Chief R. McRonald of London, Ont., was unanimously elected president of the Association to succeed Chief Charles Vince of Guelph. Chief Charles W. Short of Lethbridge, Alta., was named first vice president, and Chief Allan Clark of Lakefield was re-named secretary-treasurer. Candidates for second vice-president were Chief F. Premont of Arvida, Que.; Secord Robinson, Chief of Kapuskasing, and Gordon Hubb, Chief of the Brantford, Ont. Fire Department.

On Wednesday, Chief Secord Robinson was elected to the post of second vice-president. Victoria was named as the place for the 1950 convention of the Association.

Veteran's Hospital's Fire Prevention Program

The Fire Prevention Week program for the Veterans Hospital, Walla Walla, Washington, was designed to sustain interest in fire prevention throughout the week of October 9. According to Frank A. Maddux, Hospital Fire Chief, the schedule went about like this:

Monday, October 10: Members of the fire department distributed fire prevention literature to hospital patients and personnel. At 3:30 P.M. the fire department demonstrated the use of low velocity fog in extinguishing a live building fire (the structure, 8′ x 8′ x 10′ was constructed of scrap lumber). Patients, personnel and public were invited to witness these operations. At 7:30 P.M. in the station theatre a motion picture was shown illustrating the evacuation of a building by the chute method.

Wednesday, October 12: In the morning, Kenneth Weaver, Instructor in the State Fire School and Yakima Fire Marshal, delivered a thirty minute lecture on "Fire Prevention as Applied to Hospitals" over the station radio. In the afternoon he repeated the same lecture to personnel in the station theatre.

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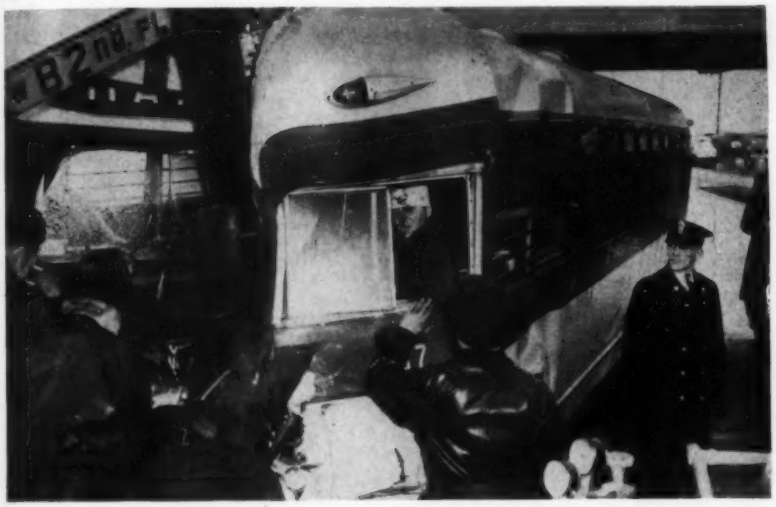
Photos by Hugh Walker

Left: Fire chiefs from the two extreme ends of the Dominion of Canada meet at the Dominion Chiefs' convention in Ottawa, Chief F. G. Vivian of St. Johns, Newfoundland, and Chief R. T. Brindle of Victoria, B. C. Center: Host Chief Gray Burnett of the Ottawa Fire Department welcoming the delegates of the Association at the Chateau Laurier. Right: Some of the Toronto delegation included District Chief Art Smith, Fire Chief Peter Hird and "Sparkplugger" Arthur C. Fox of the Box 12 Club.

First Aid For The Fireman

By HENRY F. POHL*

FIRST AID training is a must for every fireman, whether he be a member of a large city unit or a volunteer company located in a community of five hundred. However, the type of training has always been debated and challenged by various doctors and instructors of fire departments.



Because the Fire Department Is Called to Handle All Kinds of Emergencies, It Must Be Prepared to Treat a Wide Range of Injuries. Here Firemen Are Working to Release a Bus Driver Who Is Pinned in the Cab of His Bus, Following Collision with a Pole. First Aid Has Already Been Given the Victim

Granted that large cities have their training schools which embody the study of emergency measures in case of accident or sudden illness, many small communities lack these facilities and generally leave the training to the chief or appointed drill master.

Therefore, as director of First Aid of one of the largest cities in the State of New Jersey, I took it upon myself to investigate this problem of "What Kind of First Aid Should Be Taught to a Fireman," which has often been tossed into my lap.

The American Red Cross First Aid Instructor's Manual, under the Advanced Course, covers the main essentials which have often been used in training volunteer groups. Nevertheless, this course seemed to lack that extra something which was needed to fully satisfy the embryonic firefighter.

Research proved that basically a general course in first aid would suffice, but special emphasis should be placed upon various emergencies which only confront the fireman.

My investigations were readily solved when I found in one of my Red Cross Standard First Aid courses, a Battalion Chief of the Paterson, N. J., Fire Department, who, on his own time, had enrolled in the course to further his knowledge of this vital subject.

I shall never forget Battalion Chief W. L. Titus' words, after he finished the course, when he said, "I am more convinced than ever that there can be no short, quick course in First Aid for firemen. Our Chief James J. Troy has for many years advocated full Red Cross First Aid courses for his men."

Many training schools expose the new "smoke-eater" to ten hours of basic training, whereas he should attend a course which should consist, if an hourly basis be construed as a means of accomplishment, of at least 80 hours duration. This should provide the fireman with a basic knowledge of first aid.

There are many people who don't understand the dangers and perils which confront the fireman. Most people associate injuries to firemen with large, spectacular fires. This is utterly untrue. Other than falling walls, hose lines out of control, or falls due to slippery conditions, injuries are seldom sustained. The real hazardous fire is the dense, smoky, choking one wherein firemen must enter strange, congested structures and seek out the location of the fire. Here, men are exposed to possible falls into unguarded openings and the presence of flammable and explosive stocks. Since this is the more common fire encountered, it is surprising that injuries are held to such a low number.

Battalion Chief Titus is of the opinion that firemen should be concerned with two classes of first aid; that which they give to their fellow firemen to cope with injuries received at the scene of the fire, and secondly, the type that all firemen at some time or another are called upon to render to residents in neighborhoods surrounding fire houses.

Therefore, it seems logical to list the injuries and conditions prevalent in fire fighting and then build a course around these problems. Here, in the opinion of the writer and Chief Titus, are the dangers:

ASPHYXIATION—From lack of oxygen. Encountered in varying degrees that may require either complete artificial respiration or, in some cases not quite so severe, inhalation of oxygen. This condition is considerably aggravated by the presence of toxic fumes generated by burning plastics, nitro-cellulose prod-

Left: Members of a Fire Department Must Be Thoroughly Trained in the Use of Resuscitation Equipment. Right: The Fire Department Rescue Squad Must Be Prepared to Render First Aid No Matter What the Injury

*Director, Safety Services, Paterson Chapter, American Red Cross.

The Breaking of Windows During Fire Fighting Operations Is a Common Source of Cuts and Other Injuries

ucts, or other chemicals. I mention this because of several instances in the past where inhalation of these toxic fumes has resulted in death. (refer to the Cleveland Clinic Disaster caused by burning nitro-cellulose X-ray films.)

CUTS FROM HEAVY PLATE GLASS—Quite common in mercantile areas, generally caused by use of forcible-entry tools. For example, the use of door opener places unequal stress and strain on door frame, causing shattering of heavy plate glass. This drops on the operator of the door opener, causing severe cuts and, due to weight and height from which this glass drops, sometimes breaks a limb.

Carelessness while working about ordinary windows. Glass already cracked from intense heat may fall out and strike the opener's arm or feet.

CUTS FROM TOOLS—Firemen are also exposed to cuts from axes or pike poles, plaster hooks, or sharp-edged tools which they are called upon to use. However, this represents carelessness on the part of the user.

BURNS—Strange as it may seem, firemen are seldom burned by actual flame contact. Probably the most common burn received is caused by firemen coming in contact with heated metal objects, such as metal bedsteads, door knobs and stoves. Another burn hazard and the one most feared by firemen is the back draft or smoke explosion often caused by improper ventilation of a burning building. There is a particular hazard when this condition is encountered in mercantile areas, for back drafts generally blow out large plate glass show windows. This exposes firemen to the double hazard of burns and cuts from broken glass. The next burn hazard arises from careless handling of containers of volatile fluids. Containers of unknown fluids may give off fumes that can travel until they reach a hidden ember, causing a flashback and severely injuring men in this area. This hazard is greatly aggravated when such containers are spilled.

PUNCTURED WOUNDS—This injury is also quite common to firemen and is usually received about the feet. It is generally caused by nails protruding from partially-burned boards removed in the process of overhauling. Treatment is required immediately. This wound can oftimes be prevented by placing leather or metal inserts into boots.

OBJECTS IN EYES—Also quite common; caused by pieces of plaster, while removing ceilings, being struck in face by high-pressure hose stream when same is operated in smoky area by coworkers. This stream many times carries bits of charred wood and other debris into the face and eyes of firemen.

FALLS (AND IMPROPER HANDLING)—Added to the above injuries are the many conditions aggravated by improper handling. Some examples are: Firemen falling from ladders, removal of the men is started before any effort is made to ascertain the extent of injuries. Then, there is also the condition where firemen may enter smoke-filled structures, falling into unprotected floor openings, particularly true of cellars. Fire in this area is slow burning and smoky. Firemen entering this area may stumble into furnace pits and possibly incur three injuries: 1. injury to the limb in the fall, 2. striking the head against the projecting part, 3. burns from coming in contact with heated surfaces. If rendered unconscious in such a fall, and absence is unnoticed, additional hazard of drowning is set up should pit be filled with water.

GENERAL—Injuries are also received from high pressure hose out of control.

I believe it is also well to note that many times firemen are called upon to give artificial respiration under hazardous conditions; this may be to firemen trapped by falling beams or walls, or to civilians trapped in coal pockets, or

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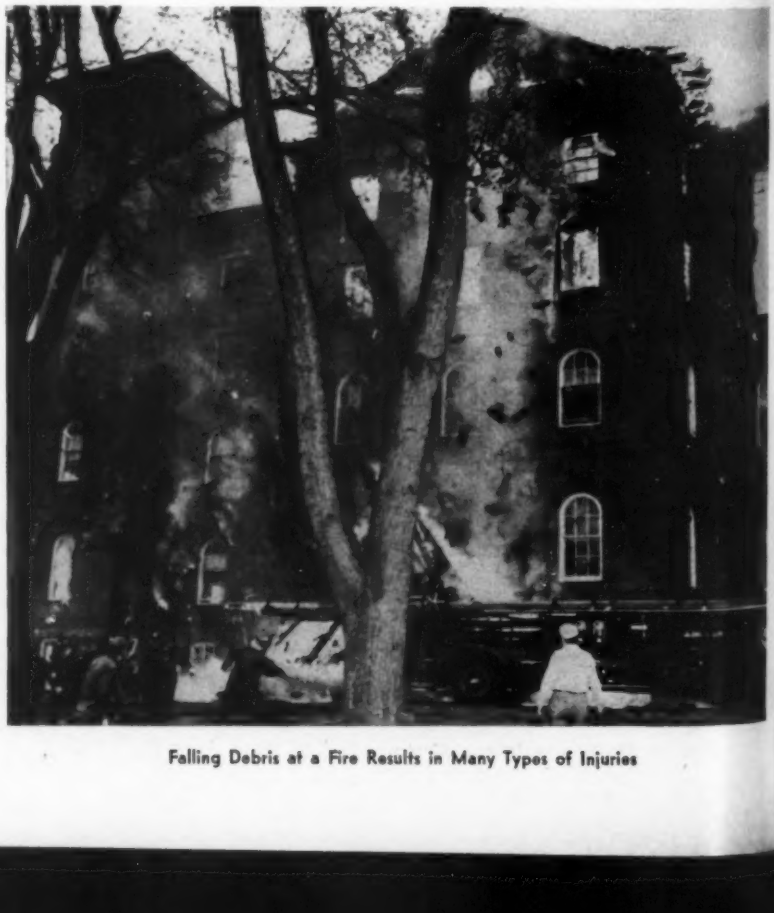

Falling Debris at a Fire Results in Many Types of Injuries

Ohio Industrial Chiefs to Meet

The Ohio Fire Brigades Association plans an all-day meeting on Nov. 5, 1949, at the Southern Hotel, Columbus, Ohio, to which all industrial fire brigade leaders are invited. There will be an educational program. Registration fee $1.00. Reservations may be made through Mr. W. W. Ballard, Columbus Coated Fabrics Company, Columbus, or Mr. L. E. Shingledecker, Chairman of the Association, 22 E. Gay St., Columbus, Ohio.

Sacramento Performs Unusual "X"-Curricular Job

It is axiomatic that "when in trouble, call the fire department." The result is that firemen are continually performing extra-curricular work—some of which is indeed far removed from the business of fire control and extinguishment.

No Fire—Just a Bit of "X-Curricular" Work
Sacramento firemen recently were called on to give city's prized elm trees a bath when all other measures failed to rid the elms of the pestiferous leaf piercing aphis. Here firemen operate deluge set to "scour" leaves and limbs.

One of the most unusual such demands made upon a willing department was that recently experienced by the Sacramento, Calif., Fire Department, Chief Terence Mulligan.

Sacramento is noted for its beautiful elm trees. There was much concern recently when an invasion of parasites (leaf-piercing aphis, it is said) appeared to be causing serious damage to these trees—not to speak of the inconvenience caused motorists by the gummy substance released by the aphis which was dropped on cars and windshields.

Various remedies applied by the Superintendent of Parks being of no avail, it was evident special equipment and "heroic measures" would be required to rid the trees of the pestiferous parasites. Washing the leaves of the pests and the gum they release, seemed to be the answer—and in the extremity, Chief Mulligan and his men were summoned for help.

The chief assigned a crew with a piece of apparatus equipped with a deluge gun to the task. A 2½-in. line was led from a reserve pumper into the deluge gun and the heavy stream was used to wash away the parasites from the leaves and limbs, generally checking the plague.

According to Chief Mulligan, Sacramento citizens were high in their praise of their fire department for this service—beyond the normal call of duty. As for the fire fighters—they considered it just another day's work.

Another Carbon Disulphide Fire Perils Firemen

One hundred drums of carbon disulphide burned in a spectacular fire that destroyed the interior of a box car in North Scranton, Pa., earlier this year. One man, a switchman, was injured. Carbon disulphide is the chemical that wrecked a portion of the Holland Tunnel last May.

The fire, of undetermined origin, was discovered by trainmen at 5:15 A.M., when the freight train stopped near the Lackawanna Railroad Clover Street crossing in North Scranton.

Aware of the dangerous cargo, an alarm was telephoned to the Scranton Fire Department and Engine 4, Hose 4 and Ladder 4, responded in charge of Battalion Chief Joe Jones, 2nd Batt. Meanwhile Box 85 nearby was pulled and Engine 9 responded. Shortly Ladder 2 was special called for more foam powder, after Fire Chief Thomas Evans and Assistant Chief David J. Davis took charge.

Efforts to control the fire by application of solid streams proved futile and as the Scranton Fire Department had no fog nozzels, the Clarks Summit Fire Department, a volunteer organization about seven miles from Scranton, was summoned.

Liberal use of water fog on the fire, applied by means of an applicator and low velocity head, and through a Navy-type fog nozzle finally controlled the hazardous blaze. This was about 11:00 A.M. The car was then shunted to a siding to permit opening the main line and firemen went about the business of overhauling.

Although flames did not destroy the steel car, the intense heat generated by the chemicals buckled both sides from 10 to 20 inches. At the height of the blaze flames shot over a hundred feet into the air. While fire fighters covered exposures, police had their hands full keeping traffic moving and preventing the curious from approching within danger distance of the fire.

Firemen took no chances with the dangerous cargo. Even though the fire in the car was controlled, applicator and fog nozzle were employed to keep down the fire until all possible danger of re-ignition was past.

The injured man, Thomas Hayes, 53, suffered second degree burns of the face, arms and hands as he aided in hooking the burning car to a yard engine to remove it from the railroad yards. No firemen were injured. The car was enroute from Buffalo to New York City via Scranton. No estimate of the loss to the car or cargo was given.

Syracuse Bans Parking Near Schools

On September 12, 1949, the City of Syracuse banned parking during school hours on all thoroughfares bordering the City's primary, elementary and high schools. The ruling was announced simultaneously by William J. Connelly, Chief of Fire and W. Frank Kavanough, Traffic Engineer, Bureau of Light and Electricity, for the two agencies which devised the necessary provisions in collaboration with the Department of Education, Diocesan leaders and heads of private schools.

The Syracuse Pupil Fire Safety Patrol program provides for leading the school children to shelters or points removed from the school after they have evacuated the building during a fire drill or actual fire.

The prohibition of parking at schools, officials emphasize, will make for more efficient and expeditious work by firemen should a fire occur in a school building.

The program was prepared and inaugurated, following a thorough survey of schools and traffic conditions. The necessary signs were set up by fire de-

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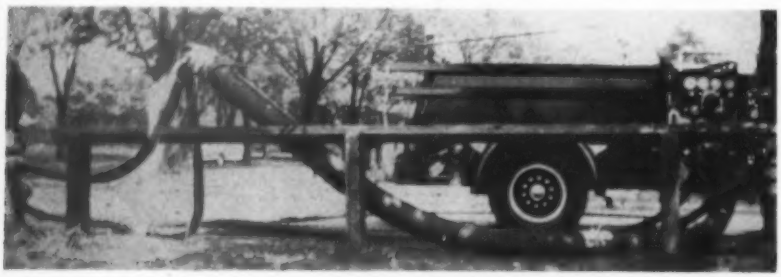
Wetting Down Carbon Disulphide Fire Near Scranton, Pa.

Short Cuts and Gadgets

GETTING WATER WHEN HOSE THREADS DO NOT FIT

We frequently hear about the predicament of the fire department of a town or city that has been called upon to aid a nearby community and when the apparatus responding to the call reaches the fire finds that its services are unavailing because its hose threads do not fit the hydrants of the community to which it is called.



In the photographs an American LaFrance 1,000 GPM pumper is shown operating at a 6 in. dead-end main with 80 pounds hydrant pressure, through three lays of 2½-in. hose, each lay comprising four 50 ft. lengths (200 ft.). The nozzle pressures were 90, 88 and 70 PSI.

A number of different expedients have been restored to in the effort to overcome such situations, some of which have been published in "Short Cuts and Gadgets." One of the best solutions is this idea developed by Captain S. Brooks of the Motor Division of the Toronto Fire Department and contributed by John Karl Lee, FIRE ENGINEERING's alert correspondent in that city, with the premission of Fire Chief Peter Herd, head of the Toronto Fire Department and Supt. H. Beedham of the Motor Division of that Department, both of whom unselfishly are willing to have their idea passed along through this Journal for the benefit of other departments that may run into this serious problem.

With this new set up, as soon as the pumper responding on the mutual aid or assistance call arrives at the scene of the fire it pulls up at one of the hydrants and connects up the two lengths of hard suction hose. These are attached to the pumper, and the other end of the hard suction is tied to ladders at the rear of the pumper or to a pole or tree, in such fashion that the end of the sleeve will be *above pump level.*

Next, two 50 ft. lengths of 2½-in. hose of the department of the community that requested the aid are connected to the hydrant and the male ends on each length cut off. These amputated ends are then shoved down into the hard suction hose as far as they will go and so lashed in, the pressure when applied will not pull them out. The hydrant man then partially opens up the hydrant so as to fill up the hard suction hose, allowing the water to spill out of the end that is tied to the ladders. The pump is primed and as the pump is speeded up the hydrant is turned on further so as to keep enough water spilling out of the high end of the hard suction. This procedure provides ample water for the pump.

OAK RIDGE COINS CATCH PHRASE TO DRIVE HOME FIRE PREVENTION

With Fire Prevention Week in the offing, here's an idea contributed by George E. Miller, Chief, Public Safety Department, United States Atomic Energy Commission, which is well worth adoption.

The signboard message "DON'T BE HAPHAZARD WITH A FIRE HAZARD" is actually part of the year 'round fire prevention campaign on at Oak Ridge. Blankenship Field is the Oak Ridge High School football field which is centrally located; the board adjoins a large parking area in the community's major shopping center where it is visible to most of those in the area. It measures approximately 10 ft. by 18 ft. and during the regular football season it carries the schedule for the local team.

The Department of Education offered the board for fire prevention and safety purposes at the close of the football season, to the Oak Ridge Citizens Fire Prevention Committee which has been active in developing and directing all fire prevention programs. This group is made up of representatives from community organizations. The group secured funds by donations for painting the message shown and for replacing the board for football use when the new season opens.

The message carried was the winner in a slogan contest conducted by the Oak Ridge chapter of the American Society of Safety Engineers, prior to the opening of the 1948 Fire Prevention Week activities. Newspaper and radio staffs have constantly plugged this slogan.

* * *

TRAINING NOT ONLY REASON FOR SUMMER DRILLS

Fire Chief Ray H. Earle, of the Massillon, Ohio, Fire Department, believes that intensive summer drilling is essential for his organization not alone because of the training it gives personnel, but for other reasons.

He considers the out-of-door training a good public relations activity. It sells the fire department to the public. He says: "If they see how we drill to combat fires in the city, they may appreciate a fireman more as a fire fighter than as a euchre player.

Next, he finds this activity promotes fire prevention endeavor. "If the public sees how we drill and practice to prevent fires, it will treat fires with more respect and be more encouraged to prevent them," he claims.

All of which reasoning has merit. It is a pretty good argument for holding some, if not all, company drills out where the public can see operations rather than holding them somewhere behind a fire house or in some out-of-the-way area.

* * *

The Old Timer Says—

"Lookin' at all the pictures of fire operations in FIRE ENGINEERING, it seems t'me that a lot of firemen, are awful lucky in not havin' more ladder accidents than they do, when you see how many wall ladders are set at unsafe angles—and worse still, left unattended —with nobody at the butt to foot'em. I s'pose some officers will justify such practices because of shortage in personnel, but it seems t'me that leavin' ladders unfooted when they're set in at more'n a fifteen degree angle with men and charged lines on'em, is courtin' worse shortage in personnel."

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Firehouse Goes Religious in Big Way

The Weaver Street headquarters of the Town of Mamaroneck Fire Department, (P. O. Larchmont, N. Y.) is in the limelight again. The beautiful fire station won prominence in the moving picture "Smoke Eaters," and prior to that got headlines when Town trustees refused the gift of a piece of apparatus from much-married Tommy Manville.

Latest development has the Town tongues awagging –some of the Town's vamps disturbed, no end. Seems they've gone and turned the firehouse into a church, come Sundays. Uh-huh—it's a fire house all week, but on Sunday it becomes a house of worship! And for two different denominations—Catholics and Jews alike. It's all kosher with Fire Chief George Burton who says they can have the building as long as they like.

First to use the site were the parishoners of the newly established Catholic Church of St. John and Paul. On Jewish High Holy Days, September 23 to 25, and October 2 and 3, members of the newly established Larchmont Temple used the same auditorium for Services.

Folks say it's the first time in history of the 26-year-old stone firehouse that its spacious auditorium has been used for religious meetings. The auditorium, which seats 300, is painted gray and hung with maroon draperies. On the platform there's a piano. Trees can be seen through the arched windows. Portable altars are provided for the services. One of the local wags wanted to know if the parishioners are disturbed by the vamps bowling in their attractively furnished basement—which is still reserved for them.

* * *

Hot Off the Tape

Firemen of Knoxville, Tenn., shoo(t) the bull in a big way! A disgusted bull became dissatisfied with life at the East Tennessee Packing plant and jumped through a window to an adjacent roof. The Brothers were called to remove him. But the bullish bull wouldn't be budged. The Braves resorted to lures—with a cow as the bait. But still the bull was adamant. Then fire hose streams were brought into play and his bullship was "washed" off the roof (Thanks RAYMOND LEE). . . . Owen Stock of Bremen, Ind., is in fairly good condition following receipt of second and third degree burns, suffered when a motor in a "mint distillery" exploded. He was preparing to distill mint on the farm of a neighbor and had built a coal fire. While cleaning out the flue, the motor let go. We dunno about distilling mint, but it sounds interestin'. . . . In Nashville, Tenn., Oscar Ramsay's bed caught fire, with him in it. Firemen and neighbors broke into his room. They pulled out the burning bed clothes and stamped out the flames. Firemen doused the bed and Ramsay with gallons of water. Police Inspector Willard Jett was finally able to shake Mr. Ramsay awake and arrest him for smoking in bed! . . . Speaking of stills, distillery and their effects, in Peoria, Ill., a man was killed in an explosion in a six-story still at the Hiram Walker and Sons, Inc., distillery. Blast rocked nearby buildings and caused damage estimated by company officials at $500,000. . . . Rene Leduc, farmer near Timmins, Ont., Canada, testified in court that he had to choose between putting out a brush fire and taking his first peep at his ninth child. He chose the baby and was charged with refusing to obey the order of a fire prevention officer who told the court "that fire cost the department $1,500 when it got away." Magistrate S. Atkinson said he'd think it over. . . . Fred Edgar of R.D. 1, Smithville, Ohio, was charged with arson, after confessing he set the $1,000,000 fire that destroyed the plant of the American Vitrified Products Co. at Barberton, Ohio, last June. The 24-year-old employe of the plant gave as his excuse that "he always wanted to be a firemen!" . . . Speaking of X-curricular jobs, fire hose stream was used in a baptism ceremony for followers of Bishop Charles M. (Daddy) Grace, Negro evangelist, outside his house of prayer in Wasington, D. C. . . . The village of Caratunk, Me., has had only three fires in the last 17 years and 72-year-old David Pooler has been the victim in each case. Fire destroyed his home in 1932. Last July his house was again razed. On September 11th flames swept his automobile. . . . A former novice of the Dominican convent, Viola Della Vecchia, 29, of Southington, was burned to death on the monastery grounds in North Guilford, Conn., September 11. Nuns saw a flaming automobile on the lawn, called police, then helped pull the victim from the car. State police said tissue paper, apparently soaked with kerosene, had been stuffed between her slip and six dresses she was wearing. . . .Police and firemen of Eau Clair freed Ray Tafel, 36, who was buried when sand walls of a nine-foot hole collapsed. His wife, Effie, 36, called police, then managed to uncover her husband's head. She kept her hands over his face, while the eight Tafel children kept fearful vigil at the hole until rescuers arrived. . . . In Reseda, Calif., Thomas C. Freeman told the judge he had patched and patched, trying to get his 13-year-old jalopy to run. Finally he gave up, poured kerosene on it and set it afire. Fifty bucks said the judge for burning rubbish without a permit. . . . Two years ago Fred Veigel won a prize for writing an essay on "Fire Prevention in the Home." Earlier this year the 19-year-old youth was held for setting fire to an abandoned farmhouse near Ann Arbor, Mich. (Thanks IRVING JOHNSON). . . . The bursting of a can of beans led to the death of Irwin Billett, 21, former sailor and aviation student at N. Y. University. He was found at 2:30 A.M. by his mother, overcome by cooking gas. It was believed he decided to cook some beans. He put a can in a pot of water which he left to boil while he relaxed in the living room. He fell asleep, the water boiled away, the can exploded, smashing the burner and permitting gas to escape, overcoming him. Police worked over him two hours, using eight tanks of oxygen—without avail. . . . Two thugs forced the "night attendant" to open the double-doored safe of the Conshohoken, Pa., firehouse and got away with over $500, the receipts from the company's 25th anniversary banquet and annual dues paid by the volunteer members. . . . Cheer! in Minneapolis, Minn., a tipsy motorist who insisted he wanted to bust through fire lines at a Hennepin Ave. and Sixth St. fire hadda pay a $100 fine in traffic court.

* * *

Here's a Plug for a New Kind of Fire Plug

Melting of a small plug in a water pipe in the basement of the Hinkley drug store, Brewer, Me., was responsible for preventing a serious blaze, one morning early, according to Brewer Fire Chief Richard Pooler.

The chief said apparently a back-fire from the furnace ignited rubbish in the drug store basement, starting a brisk blaze. No one was in the pharmacy at the time and the fire had it all its own way—until the heat from the blaze melted the solder holding a plug in a water pipe. The pipe acted like a sprinkler system, sousing the blaze until firemen arrived. They finished the job—then mopped up the inch or more of water on the floor. (Thanks Fireman LUTHER M. SMITH).

* * *

A Fireman—Not a Dish Washer

Fireman William Saunders of the Ironton, Ohio, F. D. who cares no more for washing dishes than most men and says that when it comes to doing that domestic duty at the firehouse he just won't—unless he uses them, was suspended from duty by the city manager —then reinstated in the city fire department.

Dishwashing duty, as well as other small tasks incident to eating meals in firehouse, was back of the trouble. It develops that Saunders frequently takes his lunch to the station. He maintained that upon these occasions he doesn't have to wash the dishes. He did admit that he washes dishes at home—when his wife is ill or otherwise occupied, but he felt it was not his duty to grab a dish cloth at the fire station. He was suspended on orders of fire chief John McGerty who later restored him to duty after a further study of his case. (Thanks to many readers, who contributed this item)

* * *

Orchids to Engineman Byers

Orchids this month go to heroic Union Pacific engineer, H. E. Byers of Los Vegas, Nev., who is credited with saving some 150 passengers of his streamliner train by staying at the controls and rolling the train through a seething wall of flames.

The train was making about 50 MPH when Byers saw a gasoline truck on his track. He applied the brakes, but could not prevent the crash, which ignited the tanker's contents, spreading flames over a wide area and sweeping them into the locomotive cab to ignite Byers clothing.

Despite his pain, Byers remained at the controls to pull the train safely out of the fire area, then he collapsed, critically burned.

The driver of the gasoline truck died following the crash and explosion which was heard for miles. A nearby house and two parked automobiles were set afire by the flaming fluid, but none of the train's passengers was injured. A second engineer, Edward M. Dennis, also of Los Vegas, was burned less seriously.

FALSE ALARMS

Determined

An inmate of the lunatic asylum was to be examined for dismissal. The first question was: "What are you going to do when you get out of here?"

The inmate replied: "I'm going to get me a sling shot and come back and break every damn window in this place."

After another six months in the padded cell, he was again examined. The same question was put to him.

"Well, I'm going to get me a job," was the reply.

"Fine," said the examiner. "And then what?"

"Then I'm going to buy a big car."

"Good."

"And then I'm going to meet a beautiful girl."

"That's wonderful."

"Then, I'm going to take her out driving on a lonely road."

"Yes."

"And I'm going to put my arm around the girl."

"Yes."

"And I'm going to grab her garter, make a sling shot, and come back here and break every damn window in the place."

Patient: "Doctor, my nerves are so bad I can't smell a thing."

Doctor: "Hm-m, must be olfactory nerves."

Patient: "It can't be. I work in an office."

Barber: "What's the matter, ain't the razor taking hold?"

Customer: "Yeah, it's taking hold all right, but it ain't letting go again."

"The Boys at the Firehouse Never Saw You Get Into a Tuxedo, Dear, or They'd Never Have Nicknamed You 'Speed'!"

How He Knew

A father was taking advantage of his day off to visit his maiden aunt in an adjoining city. His young son went along on the trip. When they were ready to return home the great aunt gave the boy a kitten. He carefully carried it in a covered box and took it on the bus with him. During the silence of a 20-minute stop-over, the youngster asked this question: "Dad, is my kitten a man kitten or a lady kitten?" Everyone on the bus listened hopefully.

"A man kitten," said the father.

"How do you know?" the boy persisted.

You could have heard a pin drop as the father promptly replied:

"Well, he has whiskers, hasn't he?"

"Be as Quiet as You Can. It's Paw's Napping Time!"

Calling for a Knothole

"Isn't this a stupid party?"

"Yes."

"Why not let me take you home?"

"Sorry, I live here."

"Now, then, what should a polite little boy say to a lady who has given him a nickel for carrying her suitcases?"

"Lady, I'm too polite to say it."

Wife: "Wasn't it disgusting the way those men stared at that girl getting on that train?"

Husband: "What train?"

I Passed a Cop Without a Fuss,
I Passed a Load of Hay;
I Tried to Pass a Swerving Bus
And Then I Passed Away.

The apple of a man's eye is a half-peeled peach.

The old time cattle thief now has a grandson who only pinches calves.

"WE ALMOST LOST OUR FIRST LIFE!"

says **CHIEF E. L. RECTOR**
of Grosse Pointe Park, Mich.

"Flames were enveloping the living room of a small frame bungalow. Quickly we laid down a protective cover of water with 2½" hose. 'There's nobody home,' shouted the neighbors. But on the kitchen floor we found a woman unconscious with second and third degree burns. Quick-witted personnel and reliable equipment were responsible for her eventual recovery. The cause of the fire—smoking in bed—had not marred our proud record of no fire fatalities since our incorporation in the year 1918."

Let's swap Fire Fighting Stories like this one!... What's your favorite? Send it along to us today!

FOR GREATER PROTECTION TO LIFE AND PROPERTY

Hundreds of fire chiefs and thousands of firemen know the dependability of Eureka Fire Hose—dependability that results from these features:

- ★ The Unique Smooth-Interior Filler Ply for maximum nozzle pressure.
- ★ Balanced Weave and Controlled Curing, which eliminate excessive writhing and warping.
- ★ Formula "X" for positive protection against mildew.
- ★ Bomb-Tested Linings to insure long, dependable life.

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We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

Annual Reports Received

Wellington Fire Calls Up

The 22nd Annual Report of the Wellington, N. Z. Fire Board, Chief Officer C. A. Woolley, Superintendent, for the twelve months ending March 31, 1948 shows a total of 1,655 calls responded to by the fire force during the year, an increase of 448 over the previous period. Actual fires were up in number also as were false alarms. There were no fatalities, injuries or accidents however reported for the period.

* * *

British Columbia Losses Down

The Report of the Fire Marshal of the Province of British Columbia, Mr. W. A. Walker, for the year 1948, shows fire losses of $7,147,720, a reduction of $1,212,181 from the peak year of 1947. There were 5,744 fires, an increase of 49 over 1947. The lives lost, however, were greater—total fatalities being 58, compared with 40 the year previous. There was one fire with a loss of over $700,000 and seventeen where the loss exceeded $50,000.

* * *

Belmont, Mass., Busy in Mutual Aid

The 26th Annual Report of the Belmont, Mass., Fire Department, Chief William H. Hill, for the year 1948 shows the department answered 505 calls during the year, of which 54 were on mutual aid. The department traveled 2,415 miles and used 5,946 gallons of water from booster tanks. Communities served on mutual aid were Waltham, Watertown, Arlington, Cambridge and Weston. Total losses on buildings and contents was $19,551.91—a considerable decrease from the year previous.

* * *

Alarms and Fires Down in Cedar Rapids

The Annual Report of the Cedar Rapids, Ia., Fire Department, Chief E. P. Kahout, for the year ending March 31, 1949, shows the number of fire alarms down from 854 the year previous, to 767 last year. Building fires were down from 405 to 392. Total fire losses were $199,384.52.

The report is comprehensive and indicates an alert, well manned and equipped department.

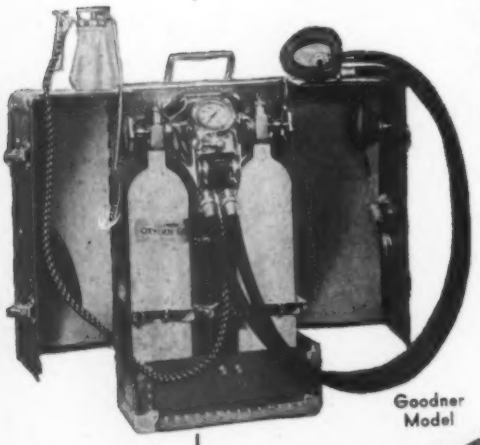
IF YOU WERE AT NEW ORLEANS—

you witnessed the tremendous interest in the—

STEPHENSON RESUSCITATOR

IF NOT—

then write today for literature on this history making automatic breathing machine—or—write for a local demonstration.



Goodner Model

STEPHENSON CORPORATION

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Correspondence

A "National" Telephone Number for the Fire Service

To the Editor:

In a communication from Chief Walter Strickfadden of Columbus, Ohio, published in the May, 1949, issue of FIRE ENGINEERING, he suggested that a national standard number be used throughout the United States for calling the fire department.

It will perhaps interest you and readers of FIRE ENGINEERING to know that in Europe, three countries have adopted this idea.

Before World War II (since 1931) in Germany the number "02" was allocated for this purpose. At this same time, in Switzerland State administration of telephones adopted number "18" for calling fire services throughout the Helvetic Confederation. France has also chosen this same number ("18—Sapeurs-Pompiers") in all dial telephone systems. In Paris each fire station (58) is connected with the public telephone system; only central fire station headquarters receives the phone alarms passed on dial 18, which are transmitted to the "going out" stations.

LOUIS BROUWET
Square Prince Leopole 17
Bruxelles 2, Belgium

Edmonton Improvements Would Cost Million

Opinions were voiced at a judicial hearing held in Edmonton, Alb., September 15, that it would cost $1,000,000 to bring personnel and equipment of the Edmonton Fire Department up to standard.

Following a disastrous fire in the Northern Hardware Company, the fire department came in for criticism and as a result Harold J. Burke, former Chief of the New York Fire Department, was requested to outline the equipment and personnel he deemed necessary to bring the department up to strength.

Burke estimated that 190 more men, 10 pumpers, two ladder trucks, an emergency squad car, miscellaneous equipment, and two new sub-stations were required, spread over a five-year period, to give the city an effective, hard-striking fire department.

Edmonton officials appeared ready to go ahead with the program, which will carry forward improvements now being instituted in the form of a new alarm system, fire station and drill tower.

John Bean High-Pressure Service ladder truck. 5-ton chassis; 60 G.P.M., 850 lbs. high-pressure pump; 2 hose lines with guns discharging 30 gals. each; 400-gal. water tank; assorted ladders up to 45 feet.

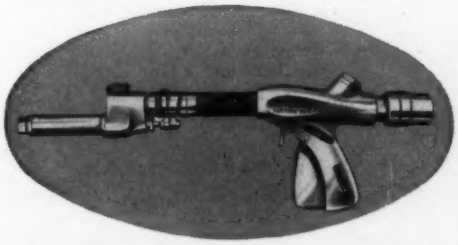
1000 fire chiefs can't be wrong!

More than 1000 fire chiefs are using John Bean High-Pressure Fog Fire Fighters for *first line fire fighting.* Their success and results are substantial proof of every Bean claim.

ONLY BEAN DOES THE COMPLETE JOB

John Bean Fog Fire Fighters . . .

1. **Go into action immediately on arrival**
2. **Eliminate almost all water damage**
3. **Require less than 10% as much water**
4. **Operate simply, both at truck and fire**
5. **Last longer because they are built complete in the Bean factory by experienced high-pressure engineers**
6. **Provide positive displacement slow-speed pump and slow engine speed. No destructive racing of engine**
7. **Carry the patented Bean Fog Gun, unquestioned for superiority in design and efficiency**



THE PATENTED BEAN FOG GUN. Operated at high water pressure, it gives every type of fog pattern for fire fighting. One man can operate it easily.

BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

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BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

"ALL-OUT"

DRY CHEMICAL FIRE EXTINGUISHER

EASIER TO HANDLE — lighter in weight by 7 to 15 lbs.

FASTER IN ACTION — 10' x 10' pit of blazing gas and oil *all out* in seconds.

PENETRATES CREVICES—completely blankets wide area.

ELIMINATES RE-IGNITION—works in winds and drafts.

NON-TOXIC, NON-CORROSIVE — harmless to everything but fire—including food.

SAFE ON ELECTRICAL FIRES—non-conductive.

FAN SHAPED NOZZLE — ejects flat stream; screens off flame from burning material; safeguards operator.

Only "ALL-OUT" gives *all out* protection. Demonstration anywhere, anytime. Write today for illustrated data.
Model A-16 illustrated, has 15 lb. capacity Model B-10 contains 10 lbs of dry chemical.

Protects the operator as it kills the fire.

Distributors' inquiries invited.

ALL-OUT MFG. CORP.
2 PARK AVENUE, NEW YORK 16, N. Y.

For Practical Discussion of Current Fire Department and Fire Management Problems

EXIT FACILITIES FOR FIRE RESISTANT BUILDINGS

RECENTLY there has been considerable attention centered on the question of codes as they apply to exits. The contention has been advanced that so long as the exit facilities—i.e., stairway and so on, were protected by fire walls, or fire doors, or located apart from the building, a single exit was sufficient.

In line with this, certain of the latest municipal building codes provide for but one means of egress in buildings of fire resistant construction, if the stairway is completely enclosed or goes to the roof.

The editors of FIRE ENGINEERING have asked a number of representative fire chiefs what they think of this provision. Did they consider this to be adequate exit facilities in case of fire? And in their experience, had they found fire department operations difficult in buildings of this type of construction.

The opinions were illuminating, and almost without exception registered emphatic opposition to such practice and such codes.

Not only is the single egress and exit hazardous to the building occupants, but it is detrimental to effective fire fighting, say these fire chiefs and fire marshals.

The response in substance recalls to mind an old axiom of the fire fighter. In entering any burning building, always make certain there is a secondary means of escape.

That seems a pretty good rule for writers of codes and ordinances to follow with respect to exit facilities, particularly in places of public assembly.

Readers are invited to send in their comments on this subject which will be continued in the next issue. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

Henry G. Thomas, Chief, Hartford, Conn.: In my opinion, any code that permits construction of a building, even though it be fire-resistant and has completely enclosed stairway, with but one way of egress fails to provide adequate exit facilities.

Experiences gained from fire disasters should lead to a general acceptance of the fact that the fundamental principle of any code should be to provide sufficient exits to empty the building promptly in case of fire. This is generally accepted as at least two ways of egress—remote from each other.

This is the practice Hartford follows, to the extent that we have required an additional exit-way in several instances from exactly the type of structure you are discussing.

Donald S. Charles, Chief, Charlotte, N. C.: We are of the opinion that the means of egress as stated in your problem does not provide adequate exit facilities for fire emergencies.

We have found, through experience, that fire fighting operations under such conditions are quite difficult, because one exit means also only one avenue of approach.

Frank Mathews, Chief, Gary, Ind.: I believe all buildings should have two or more means of egress regardless of height or type of structure. There are so many ways for a fire hazard to develop in any building regardless of whether or not such building is of fire resistant construction.

A life may be lost by suffocation if there is only one means of egress and if that is blocked by furniture, etc. You can always build another building but you can't bring back a life.

E. E. Hayduk, Chief Inspector, Bureau of Fire Prevention, Omaha, Neb.: We, here in Omaha, are well aware of the fact that there is some thinking, particularly among those inter-

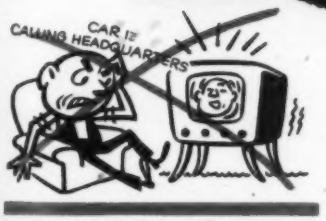
HERE IS THE QUESTION

Some of the latest municipal building codes provide for but one means of egress in buildings of fire resistant construction, if stairway is completely enclosed and goes to the roof.

1. **Do you consider this to be adequate exit facilities in case of fire?**
2. **In your experience, have you found fire department operations in buildings of this type of construction difficult?**

THE RCA FLEETFONE
30-50 Mc 2-way radio

✔ Single-unit construction
✔ More than meets all FCC requirements



Low Spurious Emission. The FLEETFONE more than meets FCC rules. Spurious emissions are well down at all frequencies—not just in the 30-50 Mc band alone.

Low Spurious Response. This feature cuts out annoying interference from transmitters operating on other frequencies.

Transducer Modulation Control. It holds your voice level constant whether you shout or whisper into the "mike." Introduces no distortion at high levels. This feature more than meets FCC rules.

HERE'S YOUR ANSWER
to better 2-way radio communication

It's here—everything you want in a *single* compact unit—the RCA FLEETFONE.

Higher Power Output. Your choice of 30 or 60 watts in the same size package.

Easy to Install. "Sandwich" construction offers the widest choice of installation possibilities.

Higher Sensitivity. Better than 0.3 microvolt, that brings in the signals after other receivers have lost them.

Low Spurious Emission. 60 db down at *all* frequencies; 80 db down between 30-50 Mc.

Low Spurious Response. 90 db over *all* frequencies; images down 100 db.

"Canyon-Curve" Selectivity. Prevents annoying interference from neighboring channels.

Transducer Modulator Control. Keeps you from "crowding" into the other fellow's channel.

Choice of 6- or 12-volt Operation. Ideal for lightweight vehicles or heavy trucks.

More than Meets All FCC Rules. Your assurance of best possible mobile communication. Your protection against early equipment obsolescence.

For complete information, write Department 104J, RCA Engineering Products, Camden, New Jersey.

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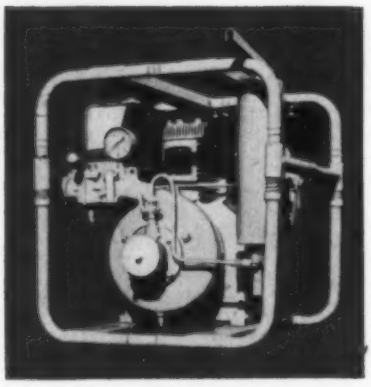
Fight Brush Fires From Moving Truck with a HALE Type FZZ Portable Pumping Unit!

Below are two on-the-spot pictures showing a Hale Type FZZ Portable Pumping Unit fighting a brush fire from a moving truck. The unit can be mounted or carried on virtually any type of equipment, making it extremely valuable for fighting brush, field and forest fires while in motion. Booster tank is used for source of water.

The Hale Type FZZ is a powerful rugged, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping. The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ⅞".

Simplicity in design and reliability are exemplified in the Hale single stage centrifugal pump, bolted direct to a sturdy four-cycle 8.25 HP, single cylinder, air-cooled engine.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. It can be easily carried to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct.



Unit is also available mounted on two wheels or on rubber-cushioned steel channels.

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Fire Pumps In All Standard Capacities

ested in providing lower cost housing units, to the effect that one means of egress is sufficient if it is properly constructed and if the building is of fire resistive material. While we agree that this type of egress is very good, we of this Bureau still are of the opinion that in buildings of over two stories, or in two-story buildings if the area and occupancy are of some size, one means of egress is insufficient. It has been our experience over a period of years that one means of egress, or of ingress, makes both rescue and fire fighting operations difficult. As a matter of fact, this Bureau has been particularly active during the last few years in a campaign of securing additional egress and ingress facilities in all types of construction. Perhaps we are wrong in our thinking, but in view of the responsibility of a fire department towards protecting lives and property, we definitely feel that to amend a code to permit only one means of egress, would be a step in the wrong direction.

Lon C. Shaw, Chief, Fort Smith, Ark.: I definitely do not consider just one means of exit adequate for any type building, even one story.

We of the fire service consider buildings of this type less hazardous. However, countless lives have been lost in such buildings. Fire is no respecter of buildings so we must consider the hazard of a fire resistant structure as we would any other type of building.

Suppose this fire were confined to the stairway. With only one means of egress and that one afire, occupants of said building would be more or less trapped, doubling the work of firemen because of the necessity of saving life first.

Should the fire not be in the stairway, but close enough to it to make it mandatory for the fire department to use the stairway in their operations, firemen would be hampered in conducting rescue work and extinguishment practices at the same time in such a space.

Should the fire cut off this one means of egress to the occupants, which happens frequently, then considerable danger would occur both to rescue operations and to the spreading of the fire itself.

I should say that even in one story buildings of fireproof construction, there should be at least two exits and more, depending on the type of building.

B. H. Cummings, Chief Ownesboro, Ky.: I don't think one fire escape is enough on any kind of building regardless of how fireproof it is.

We have no buildings of this type in our city.

Fred J. Wells, Chief, Fargo, N. D.: I believe the standards set forth in Article Six of the 1949 National Building Code should be the basic demands insofar as exit facilities are concerned. My belief is based on the fact that "Experience is the best teacher." Much can be gained from experience: if anything other than sorrow from wishful thinking and false security.

My experience is limited to two fires and I therefore do not feel that it has been sufficient enough to make a definite statement, other than to say that where you have taken away an operational point, operations of a fire department are somewhat handicapped.

Ira D. Leech, Chief, Decatur, Ill.: I can only say that my experience has been that it largely depends on the contents of the building. We all know that there is a chance of an explosion near an enclosed stairway and it may be impossible to enter. Therefore, I am against any one exit from any one floor. Any number of people from that floor could not escape.

I would much rather reach the floor involved from a ladder than through an enclosed stairway. Of course, the question of manpower enters the picture with me on this.

Frank S. Sandeman, Chief, Long Beach, Cal.: If it were possible to exclude combustible contents of any kind from the building, one egress might be adequate. Too many people have the mistaken idea that because they live or work in a fire resistant building, there is no possibility of a major fire.

We have no buildings of the type described in the question, except two-story buildings. I certainly would oppose any such inclusion in our building code.

G. Napoleon Guevin, Chief, Manchester, N. H.: I do not consider that one means of egress from buildings of fire resistant construction is adequate. The various contents of a building are of great importance. Its size and the distance of exit stairway from areas where employees are at work should also be considered. It is not only important that means of egress be, like the building, of fire resistive construction, but it is of great importance that they be near enough and easily accessible to employees and, in turn, to firemen in case of emergency.

Easy accessibility to a fire and ability to surround it, which in turn facilitates the control of the spread of the fire, are of prime importance. The contents of the building must be considered first. If we are limited in our ability to reach the fire, the damage from fire increases in the same ratio. It has been my experience that in buildings of this type we have been hindered by the lack of sufficient means of entrance to the building.

Zephrin F. Drouin, Chief Engineer, Lewiston, Maine: From twenty-five years experience in fire fighting, I doubt the practice of sacrificing means of egress for fire resistive construction in buildings at this early stage, due to the fact that panic might well ensue if fire broke out and there was only one means of exiting from the building.

A means of egress is of paramount importance. Take the Winecoff and LaSalle Hotel fires and too the recent fire on the Noronic at Toronto, Canada. Here are typical examples of panic behavior when fire breaks out unexpectedly. I don't believe in being "penny wise and pound foolish" where lives and property are concerned.

Too many architects are going out on a limb in providing but one means of egress in public buildings and institutions. The municipal officers are being lax in their duties in permitting building codes to that effect.

Last month I encountered a similar situation in a building fire wherein the second means of egress was closed to provide for another room in an apartment. Fire broke out on the first floor in the dead of night. The occupant in fighting the fire lost his

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life and the occupants of the second and third floors were trapped. Six persons were in the windows of the third floor and were shouting that they were going to jump to the ground. This building was not of fire resistant construction but it doesn't matter when panic occurs. The means of egress is of utmost importance.

Had it not been for the alertness of my deputy chief in convincing them that the aerial ladder was being placed with great difficulty on the lawn and in between the tall trees for their rescue, I am sure that more lives would have been lost at this fire of August 29th last.

Fire resistant buildings are excellent, but when fire breaks out in a building the combustible materials will throw off hot gases and smoke which will rise at each opening. These deadly gases will kill anyone if panic breaks out. Sufficient means of egress must be provided. Statistics will show at the Cocoanut Grove, the Winecoff and LaSalle fires that when panic takes place, the trapped victims have no respect for women or children. A good example is the Noronic ship disaster. Witness disclosed that the victims were trampled to death and a great many were trapped by the smoke blinding their means of egress. I, for one, am in favor of at least two means of exit from a building, and I do mean two separate exits. Our city ordinance provides for such and I find that the owners of buildings are most willing to provide for the safety of their occupant.

E. P. Feaster, Chief, Lincoln, Neb.: I do not consider one means of egress adequate exit facilities in case of fire in any building, as circumstances could arise which would make it impossible for all occupants of the building to use this one means of exit.

My experience has been limited in fire department operations in cases of fire in this type of construction. In my opinion the fire department would have difficulty in the early stages of their operations, due to the fact that all occupants in the building above the first floor would be congested in this one exit.

* * *

The following replies are in answer to a previous round table on portable aerial ladder practices.

D. C. Musick, Chief, Abilene, Tex.: We use 50-foot portable extension ladders in this department. They are of wood. We do not have enough men responding on ladder trucks to raise these ladders quickly and efficiently.

We use the 65-foot aerial ladder and shorter ladders on fires up to the third floors. So far, we have not needed the 50-foot ladder since we received the aerial. I believe that if we had to use the 50-foot ladder we would have to use outside help, or pull men from other jobs to put it in operation.

John E. Brennan, Chief, Cumberland, Md.: We have one 50-foot extension ladder in this department. It is of wood. The 50-foot extension would have to be operated by members of the ladder company with the assistance of members from engine companies.

World Wide Fire News

By Roi B. Woolley

Many Killed in Spanish Arsenal Blast

Late in July a gigantic explosion wrecked the Tarancon military arsenal at Tarancon, Spain, destroying dozens of near-by buildings and trapping many residents in the wreckage.

Known dead were set at thirty-three persons with 105 injured. Many others were unaccounted for and believed in the debris. Forty of the injured were in serious condition.

The blast is said to have centered in the power arsenal. It occurred early in the morning of the 26th, but cries of trapped victims could still be heard late in the afternoon in the wreckage-strewn streets of the city of 7,000.

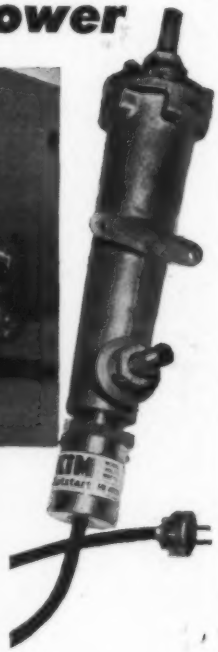
Rescue operations were hampered by electric rationing ordered only that day as a result of prolonged summer drought, and workers had to dig through the debris by lantern light. The town was deserted because fires kept exploding powder reserves and large and small ammunition rocketed in all directions.

* * *

Hot Off the News Ticker

Intensely hot weather caused two artillery munitions dumps to explode August 1, near Segovia, Spain. Two soldiers were slightly injured. . . . Tons of gun cotton stored in caves by the Japanese before their World War II surrender, blew off the side of a hill September 7. The blast was felt throughout Tokyo. The extent of casualties were not reported, but many persons received cuts. Roofs of two buildings of a fertilizer plant were shattered. . . . A Northwest Airlines DC-4 landed safely at

Full Starting Horsepower



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Reduces engine wear and depreciation

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Medford, Ore., after turning back on a Seattle-to-Honolulu flight when a warning light indicated fire in the baggage compartment. Fire extinguishers were used while the plane was returning and, on landing, baggage was removed, but no fire was found. . . . Ten persons were killed and eight seriously injured when a truck dived off a mountain road near Merucoa, Brazil. Twenty-two persons were in the truck which fell 120 feet into a ravine and caught fire. . . . A chemical explosion at Scotland Yard, injured two scientists. Clouds of smoke poured from laboratory windows in the Yard as the blast echoed over Whitehall. Chemicals suspected of having been used for safe-breaking were being tested. The laboratory was ruined but the famed building was only slightly damaged. . . . Firemen from five Bergen, N. J., communities fought a general alarm fire late in August that destroyed the Sky Harbor Aeronautical Corp.'s seaplane base on the Hackensack River at Paterson Plank Road, Carlstadt, N. J. Loss $60,000. Three Carlstadt firemen were injured. Rutherford, East Rutherford, Wood-Ridge and Wellington, N. J., firemen aided local forces. . . . The old whaling station at Field's Landing, Calif. —only one in the United States, burned September 19, with loss estimated at $50,000. The plant, on Humboldt Bay south of Eureka, Calif., had processed 48 whales this season. . . . Three hundred tons of old shells blew up September 18 in an ammunition dump on the outskirts of Cairo, Egypt. Minor explosions continued for four hours, causing near panic in the city. An unspecified number of soldiers were injured. . . . Faith Hampton, beauteous actress of the silent screen, and her husband, Don Short, were suffocated as fire destroyed their one-room garage apartment in Hollywood. . . . The Philippine National Bureau of Investigation arrested a 20-year-old girl believed responsible for setting the second of two Cebu fires which left three persons dead and an estimated 30,000 homeless earlier this year. . . . Despite the efforts of townspeople who had turned on the headlights of some thirty automobiles, including cars of firemen, on a field in an attempt to guide a "lost" plane to an emergency landing, a pilot and his companion were killed September 20 when their single-engined craft was smashed. The pair evidently became confused in fog and rain. . . . In Preum, Germany, an unexplained explosion of 350 tons of dynamite left a toll of at least fourteen dead, ten missing and scores injured. Scores of homes were shattered and a crater 100 ft. deep was blasted by the underground cache of dynamite being used to demolish Hitler's West Wall. Over 700 were left homeless. . . . An explosion on the Big Inch pipeline killed one youth and injured two others. The Texas Eastland Transportation Corp., which operates the natural gas line, declined to release any information on the cause of the blast, or damages. . . . In July it was reported at least 120 persons had been killed or injured in the explosion of a Nationalist arsenal in Canton, China. On August 23, 500 persons were reported killed or injured in the explosion of an ammunition ship in the Formosan port of Takao. An official Chinese agency later reported the toll as actually eight dead, ten critically injured and 189 slightly hurt. . . . The Roscoe B. Jackson

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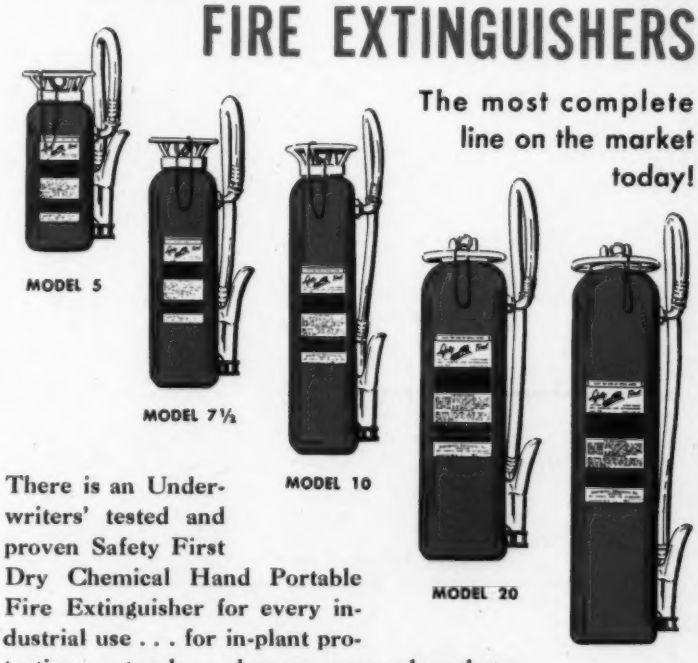

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SAFETY FIRST COMPANY
ELMSFORD, NEW YORK

Memorial Laboratory, at Bar Harbor, Me., was almost completely destroyed in the holocaust of October, 1947. On August 22 last, a newly rebuilt laboratory was dedicated on the date marking the twentieth anniversary of the institution's founding. . . . The 900-ton British ship "Chak Sang" exploded and burned September 7 in the harbor of Hong Kong with an estimated loss of life of thirty-five. Forty-one persons were rescued from the raging seas, one the captain. Unofficial reports said the ship was due to sail for Korea with a cargo of potassium chlorate. . . . The largest oil refinery in Yugoslavia was blown up August 25 by saboteurs. Fires raged out of control for several days. The plant, taken over from Italy under the Italian peace treaty, was expanded greatly by the Belgrade government and was the only modern Yugoslav refinery. . . . In Long Beach, Calif., a vitamin factory blew up. Heavy gasses produced by a final extraction process of shredded carrots for vitamin "A" caused a dull explosion. Flames followed the blast and burned the small building in the rear of the plant. Nobody injured—damage slight.

* * *

Planes Test Defenses on East Coast

A taste of wartime defense was had by 14,000 civilian volunteers who manned observation posts scattered from Maine to Delaware in a week-long exercise, beginning early on September 10 last, to spot bombing planes flying in formation toward strategic targets throughout the northeast Atlantic coastal region.

Seconds after the marauding "enemy bombers" (planes of the National Guard) came into view, the volunteer spotters began telephone "Air Force Flash" calls to one of six filter centers set up to sift and co-ordinate observations.

One thousand, two hundred observation posts were involved the opening day. Through "filtered" and evaluated information received from the posts and also from radar detection installations, the air defense headquarters at Mitchel Field, L. I., was able to dispatch fast interceptor aircraft in short order toward bomber formations.

Both Air Force and Navy fighter units were used. The first interception occurred over southern New Hampshire; soon after that Naval fighters from the Naval Air Station at Atlantic City intercepted over Long Island an "enemy" formation attacking New York. Jets, speeding at 600 mph from Otis Field, near Falmouth, Mass., joined with F-82 "Twin Mustang" all-weather fighters from Mitchel Field and Langley Field, Va.

One of the key defense points was the Westchester Airport, near New York City. At a late hour, no reports of crashes or fires had been received, but it was disclosed that the week's exercises had shown the need of certain improvements in air defense, and weaknesses in the present defense set up.

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It's the Gorman-Rupp Dual Fire Fighter. Use it to fight fires direct -- use it where water supply is inaccessible to the truck pumper. It throws 100 gallons at 70 pounds pressure or 80 gallons at 80 pounds pressure. Primes in 15 to 30 seconds with a positive acting exhaust priming device. No adjustments between priming and pumping -- compact -- easily carried by two men.

Use it as a booster pump. Valuable for dewatering and many other important jobs -- wherever you desire to save wear and costly damage to expensive truck pumpers.

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What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of September, 1949.

Month Ending September 30, 1949

Burnaby, B. C.—Six hundred foot drying shed, three bldgs. and machinery of Coast Peat Co. factory, with bales of harvested peat, destroyed.
Oshawa, Ont.—Bldgs. of Kohen Box Factory destroyed.
Atlanta, Ga.—Southwest DeKalb Grammar School damaged.
Iowa Falls, Ia.—Three-story bldg. using as main bldg. of Ellsworth Junior College, top floor and rest of structure heavily damaged. Struck by lightning twice during storm.
Kennebunkport, Maine — Kennebunkport Playhouse destroyed.
Royse City, Tex.—Clockwise dress factory, Polar Bear Ice Cream Co., Citizens State Bank, a blacksmith shop and remodeled theatre, damaged.
Juneau, Alaska—Juneau Spruce Corp. destroyed. Spark from acetylene torch.
Los Angeles, Cal.—Two-story whse. of Gold Furniture Co. destroyed.
Billings, Mont.—Baker Transfer & Storage bldg. damaged. Boys with matches.
Kearny, N. J.—Pyroxy Trading Corp., Inc., Jasco Chemical Co. and Kearney Bldg. Block Co. damaged.
Nyssa, Ore.—Allen Packing Co. destroyed.
Dallas, Tex.—Rosenthal Packing House and Waples Platter damaged.
Odessa, Tex.—Drug store and 15 offices in heart of business district damaged.
Beloit, Wis.—Taylor Freezer Corp. damaged. Automatic gas heater exploded.
Beloit, Wis.—Tecknicraft Co. destroyed.
Merrill, Wis.—Four bldgs. of plt. of Lincoln Foundry Co., Scott township, destroyed.
Chandler, Ariz.—Whse. of National Dehydrating and Milling Co. destroyed. Explosion.
King City, Cal.—The Main Hotel bldg. destroyed.
Oakland, Cal.—Best Fertilizer Co. damaged.
McMinnville, Ore.—Starr rock crusher machinery destroyed.
Bristol, Pa.—Garage and shop of William States Trucking Service, six miles west, destroyed. Gasoline explosion.
Ambridge, Pa.—Cloverton Hills, the old Henry Buhl mansion, near Leetsdale, destroyed.
Lamesa, Tex.—National Guard Armory and contents damaged.
Colfax, Wash.—Whse., Whitman County Road

Dept., destroyed. Road machinery also destroyed. Ignited gasoline.
Everett, Wash.—Big Four Inn destroyed.
Pasco, Wash.—Nake River bridge destroyed. Cigarette.
Eldorado, Kans.—Three barns and prize cattle on farm of George Sluss destroyed.
St. Paul, Minn.—The Fred S. Saam Trailer Co. damaged.
Westbrook, Minn.—Jack Spratt Super Market and Westbrook dairy damaged. Spontaneous ignition.
Kansas City, Mo.—Bldg. of Parrish Appliance & Implement Co. damaged.
West Yellowstone, Mont.—Wheel Night Club damaged.
Oklahoma City, Okla.—Whse. of the State Highway Dept. Some 200 barrels of motor oil destroyed.
East McKeesport, Pa.—David Lee Tavern on Route 30 damaged.
Pittsburgh, Pa.—Stable of the Allegheny County Free Fair and restaurant damaged.
Montreal, Que.—Clubhouse of Summerlea Golf Club, near Dixie, destroyed.
Peoria, Ill.—Still at distillery plt. of Hiram Walker & Son, Inc., damaged. Explosion.
New Portland, Maine—Carrabasset Dowel Mill of Dwight Shieves destroyed.
Atlantic City, N. J.—Pleasure Palace Ballroom and several concessions on Million Dollar Pier destroyed.
Memphis, Tenn.—Park Avenue Restaurant destroyed. Weona Grocery No. 7 destroyed; Lincoln Park Supply Co. destroyed.
Lamesa, Tex.—O'Donnell High School damaged.
Randle, Wash.—Randle Grade School destroyed.
South Bellingham, Wash.—Tavern, shoe shop, barber shop and eight dwellings destroyed. Cigarette.
New Berlin, Ill.—Grain elevator of Agen Grain and Milling Co. destroyed.
Winchester, Ill.—R. & W. Drew Mfg. Co. destroyed.
Lynn, Mass.—Lynn Classical High School damaged.
Beatrice, Neb.—Grain elevator destroyed.
Brigham, Utah—Baron Woolen Mills plt. damaged. Defective motor.
Vancouver, Wash.—Bldgs. on farm of Elmer Ruffner destroyed. Spark from hay dryer.
Edmonton, Alta.—Northern Alberta Dairy Pool bldg. damaged. Natural gas explosion.
Doatsville, Ky.—Whse. of T. W. Samuels Distillery, Nelson County, destroyed.
Cashmere, Wash.—Cashmere Fruit Growers Union plt. destroyed.
Eureka, Cal.—Cid Whaling station, Field's Landing, destroyed.
Orchard Farm, Mo.—Wooden trestle over inlet of Marias Temps Clair Lake, 2½ miles east, owned by Chicago, Burlington & Quincy Railroad, damaged.
Sioux Falls, S. Dak.—Buttercup feed mill, U. S. Highway 16, west, destroyed.
Whitney, Tex.—School gymnasium destroyed.
Caraquet, N. B.—Business district fire destroyed bowling alleys operated by Simon Mallet, Shoe Repair shop and Langtienne Ladies Wear shop, as well as upstairs apts.
Santa Rosa, Cal.—Ranch of Charles E. Wehn, near Healdsburg, damaged.
Willows, Cal.—Sears, Roebuck & Co. store damaged.
Bethany, Mo.—Bldg. occupied by Harrison County Times, Brown Drug Co., dental offices of J. H. Hinkle and R. L. Hinkle, Bert Cornelison insurance agency and J. E. Hatten real estate agency, destroyed.
Vancouver, B. C.—Western Insulation Co. offices and whse. destroyed.
Ottawa, Ont.—Belmont Hotel damaged.
Toronto, Ont.—Noronic, lake cruise steamer, owned by Canadian Steamship Line, destroyed. Flash fire.
Hull, Que.—Chaudier Golf Club's clubhouse destroyed.
Denver, Colo.—Crescent Flour Mill destroyed.
Beltsville, Md.—Granary of Agricultural Research Center damaged.
St. Paul, Minn.—Bldg. occupied by Minnesota Sawdust & Shavings Co. and apt. of Simon Rowe; Twin City Cartage Co. and dwelling of Ashely A. Hughes, destroyed. Adamson Plumbing Co. and dwelling of Winnie Costello damaged.
Beatrice, Neb.—Aller & Pease Elevator destroyed. Spontaneous ignition.
Forrest Grove, Ore.—Vandervelden apts. destroyed. Faulty heating plt.
Athens, Tenn.—Finishing and cabinet dept. bldg. of Riggs-Buttram Lumber Co. destroyed.
Fort Worth, Tex.—Magnolia Refinery No. 1, Hodge Station, damaged.
Washington, D. C.—Thomson's paint store damaged.
Rochester, N. H.—Wooden mill and one million board feet of lumber at W. H. Champlin Box Co. destroyed.
Pecos, N. M.—Midway general store and dwelling destroyed.
Portland, Ore.—Tracey & Co., automotive firm, destroyed. Defective wiring.
Portland, Ore.—Sharp Electric Co. and four rooming houses destroyed.

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Simple, *obvious* operation makes the Randolph really panic-proof—gets it into action *before* the fire spreads—kills fire instantly with a snowy cloud of CO_2! No valves to turn, no nozzles to adjust; just point and press your thumb! Randolph CO_2 is non-damaging, evaporates without a trace. It's non-toxic, won't conduct electricity, deteriorate or freeze. UNDERWRITERS' APPROVED.

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ELKHART BRASS MANUFACTURING CO. Inc.
Elkhart, Indiana

Borger, Tex.—Phillips Petroleum Co.'s gasoline plt. destroyed.
Cookeville, Tenn.—J. P. Hawkins Feed Mill destroyed.
Fresno, Cal.—Byles-Jamison Lumber Co. destroyed.
Crawfordsville, Ind.—Coffin Bros. Orchard, storage bldg., 23,000 bushels apples, cider press, five tractors and truck, destroyed.
St. Louis, Mo.—Evans and Howard Sewer Pipe Co. plt. damaged.
Butte, Mont.—Park Theatre bldg. and contents destroyed; eight business houses damaged.
Charleston, S. C.—Woodstock Mfg. Co. almost completely destroyed.
Kentland, Ind.—Edward J. Funk & Sons hybrid seed corn plt. destroyed.
Oklahoma City, Okla.—Safeway Grocery Store destroyed.
Mechanicsburg, Pa.—Plt. of Mechanicsburg Laundry destroyed.
Philadelphia, Pa.—Keystone Rendering Co. damaged.
Sacramento, Cal.—Feed Processing plt. of Bercut Richards Co. destroyed.
Sacramento, Cal.—Richfield Oil Corp. hdqts. damaged.
Medford, Ore.—Alturas plt. of California-Oregon Power Co. damaged.

Questions and Answers

Handling Spillage of Flammable Liquids

To the Editor:

We have a hazardous situation in our city in regards to the spillage of gasoline while trucks are unloading into gas service station tanks. Secondly, we have eight marine terminals which have a total capacity of about 65 million gallons of gasoline in storage. Thirdly, we also have transport trucks leaving the terminals at the rate of one every fifteen minutes during the 24-hour period of the day.

In regards to spillage at service stations, our only method is flushing the spilled gas down the sewer, but we have been receiving complaints from the superintendent of the sewage disposal plant. Have you any other ideas that we could use to eliminate this hazard.

If one of the tanks in the marine terminals should develop a leak, what method could be used to dispose of this gas?

If one of the transport trucks should become involved in an accident here in our city and the gasoline is spilled onto the street, what methods other than flushing would you suggest? W. J. C.

Answer: Your problem is similar to that of a number of cities where there are large storages of gasoline and fuel oil. As we understand it, your difficulty takes three forms: (1) flushing of gasoline down city sewers, with resultant danger of explosion and fire (2) handling leaks at marine terminals and (3) combating fires resulting from accidents on city streets, where gasoline is involved.

You will find some information—and at least partial answer to the third question, in the two-part article on "Transportation Hazards of Flammable Liquids," which appeared in the August and September, 1948, issues of FIRE ENGINEERING.

Study of the problem indicates that the problem of disposing of spilled gasoline on waterways is a difficult one, particularly where there are no fireboats available. The first precaution, of course, is to cover all possible exposures until the hazard is removed. The next is to attempt to drive the spillage out to sea or away from the landside. This is not easy where all operations must be directed from the shoreside. Even if boats are available, from which streams could be directed to drive out the flammable fluids, care must be exercised in operating them, lest they become involved in fire, should the fumes flash.

It should be stressed that in covering exposures (and this applies to all accidents involving highly flammable fluids) guard should be set up to prevent smoking or other means that might possibly ignite fumes.

Where large sized fog nozzles are available (the 500 GPM type) they can be employed to cool the atmosphere—if not over the entire spill area, at least along its edges, particularly the shoreline. This will reduce the possibilities of explosion or flash, although it will not tend to float the hazardous fluids seaward. Hose streams, swept along the surface of the water, will accomplish this.

The extent of the spill (whether on water or on roadway) will determine the length of time required to cover, or protect the area as described, until the points of the gasoline have vaporized. This usually takes some time and the protective guard should not be removed until all possible danger has passed. Logically, the thinner the spread of spillage, the more quickly will the gasoline vaporize and the danger of flash be

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SENSIBLE LUG COUPLINGS
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The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.

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removed. Some departments, where there is no possible danger to exposures, ignite the spillage and permit it to burn off, confining it to safe areas with fog and streams.

If foam is available in the desired quantity, it, of course, should be employed. A good foam "blanket" of either chemical or mechanical foam, should be applied as quickly as possible and watched to see that it does not blow away or be otherwise dissipated. Even where foam is so applied, protective lines should be stretched, ready for any eventuality.

The foregoing suggestions deal mainwith marine and highway spillage. Where fire involve service stations—and there are not too many of these in most cities having proper regulatory measures—it has been the custom for fire departments to flush the burning fuel down the sewer system.

A number of fire chiefs object to flushing unburned fuel into the sewer systems because of the danger of ignition of the volatile vapors and resultant explosion. However, not as many objections are voiced over the flushing of burning gasoline or other fuel into the system.

If there is any way to divert the flow into empty lots, or other area where exposure hazards are not too great, this may be done and the usually effective protective measure of foam and water fog be employed. Frequently a dam may be built of sand bags or other materials, at a suitable place on the highway to divert the flow into safe channels. Then the spillage can be covered with a foam blanket. Foam is not always effective, however, where there are moving currents of the fuel, hence the need, if possible, of collecting the spillage in some sort of catch basin or other container.

Where it is necessary to flush the fuel into the sewer system, care must be used to guard against explosion, all along the sewer way. Manholes may be removed and streams directed into the sewer to speed flow and guard must be placed at the sewer exit to watch for and guard against ignition at this point.

Summoning Volunteer Firemen

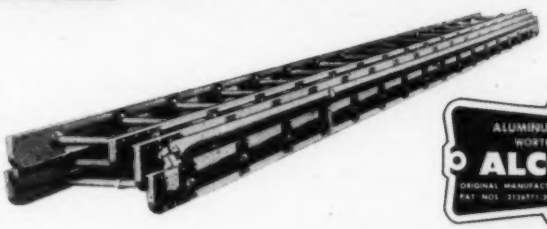
To the Editor:

We are a suburb of a large midwestern city and depend on about twenty volunteers for help in the event of a fire. Up to the present time we have been calling our men by telephone through the telephone exchange. The telephone system is going to be changed to dial phones and the telephone officials say that with the elimination of operators they cannot give us the same service. I would appreciate hearing how other cities who faced this problem solve it.

W. L.

Answer: Personally I believe that the method of placing dependence upon the telephone for calling volunteer firemen is—and has been—all wrong. It has been proved that it results in delay and confusion for both the fire department and the telephone company. Undoubtedly the most successful method of alerting volunteers and speeding up

NOW! POSITIVE IDENTIFICATION



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Write for folder containing complete information on our line of Light and Heavy Duty Fire Ladders.

The Original Manufacturer of Aluminum Ladders

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The NEW Three Stage DARLEY Champion Pump

500 or 600 or 750 Gallon Underwriter Performance
PLUS
60 Gallons per Minute at 850 Lbs. For High Pressure Fog

NEW 44 PAGE BOOKLET of FIRE APPARATUS & FIRE PUMPS

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STERLING SIRENS

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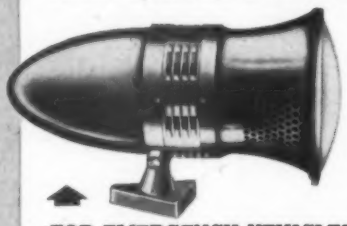

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Model 20 SIRENLITE—a powerful siren combined with an automatically flashing red light.

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THE STERLING SIREN FIRE ALARM CO., INC.
58 Allen St., Rochester 6, N. Y.

New Safety
FIGHTING NIGHT FIRES!

The above photo shows the Janesville fire coat thoroughly "Safety Conditioned" with "Scotchlite" trim. It really stands out!

Janesville fire coats, either duck or rubber type, are now available fully "SAFETY CONDITIONED" with amazing "SCOTCHLITE." The moment any light strikes its surface the safety material leaps into action to protect the fireman. "SCOTCHLITE" is composed of millions of tiny glass beads which reflect any light striking its surface with astonishing brilliance.

Our coats have been approved as "SAFETY CONDITIONED" only after exhaustive tests made by the manufacturers of "SCOTCHLITE" in their safety standards laboratory under actual night time conditions to insure that sufficient "SCOTCHLITE" has been used in the proper places for complete protection.

When fighting night fires, headlight beams of approaching cars strike the "SCOTCHLITE" trim on the JANESVILLE COAT reflecting light with dazzling brilliance and giving the drivers unmistakable warning that the fireman is there. Firemen are easily located, with a flashlight, on ladders or when overcome by smoke or heat in dark places. Absolute safety for firemen rolling hose at night in streets.

"SCOTCHLITE" bands extend completely around cuffs and bottom of coat. In addition to front stripe shown in illustration the coat has a horizontal band from shoulder to shoulder across the back.

Proudly we offer this additional safety feature to our high quality coats at a cost of only $3.50 in addition to the regular price of the coats listed in our catalogue.

Janesville APPAREL CO.
JANESVILLE, WISCONSIN

their response to alarms of fire is to use a siren, or diaphone whereby coded numbers can be sounded and be heard by all parts of the community protected by that fire department.

It requires only a moderate initial investment for the alarm unit and a transmitter upon which can be set up the code numbers representing the phantom fire alarm boxes.

If you do not maintain 24-hour watch in your firehouse, this transmitter can be placed, with the horn or siren, either in the police station or any other location where there is 24-hour attendance. Inasmuch as you must make a change in your present system, the writer believes it highly advisable that you at this time secure the suggestions and estimates from those concerns manufacturing such signalling devices as described.

Fire Schools and Colleges

New York State Instructors Hold Indoctrination Session

Approximatey 100 fire service instructors from nearly fifty of the state's fifty-seven counties, and members of the New York State Fire Advisory Board, conducted a week-long program of indoctrination in advanced firemanship training, September 12-17 in White Plains, Westchester Co., N. Y., as part of the program of education inaugurated by the State Division of Safety some months ago. The program was directed by County Fire Coordinator B. Richter Townsend; Palmer Hurcourt, Deputy Director, Division of Safety, and Chief Roi B. Woolley, Deputy Fire Coordinator, Westchester, aided by the White Plains Fire Department. Chief H. Abbott Griffin and Deputy Chief Edward MacDonald.

Instruction was given by Chief James Just, Director, Fire Service Extension, University of Maryland and Edward C. Muhlhausen, assistant to the vice-president in charge of personnel training, Empire Trust Co., New York, aided by lecturers on specific topics. These included Acting Battalion Chief Harry Irwin, New York Fire Department on Pump Operations; Hugh N. McNair, Carbide & Carbon Chemical Corp., Fog and Wet Water Operations; Chief Roi B. Woolley, Assistant Editor, FIRE ENGINEERING: Problems of Coordinated Attack.

* * *

Sixteenth Annual Maryland Short Course

Several hundred volunteer firemen attended the Sixteenth Annual Short Course, September 6 to 9 inc. last, at the University of Maryland. Chief James Just, Director Fire Service Extension, aided by a committee of the Maryland State Firemen's Association and a large Program staff provided a busy four-day session. Special lecturers included: H. C. Buckingham, Director, Department of Forestry, Annapolis, Md.; Emmett T. Cox, Western Actuarial Bureau, Chicago; Former Battalion Chief Carl Dressen, recently with the Office of Civil Defense Planning; J. G. Gaskill, District Manager, Mine Safety Appliance Co., Baltimore, Md.; Battalion Chief A. M. Grunwell, District of Columbia Fire Department; C. M. Howe, Jr., Engineer; D. W. Just, Electrical Engineer, Underwriters Labora-

tories, Chicago, Ill.; Warren Y. Kimball, Editor, "Firemen," N.F.P.A., Boston, Mass.; C. C. Larrimore, Fire Service Extension, University of Maryland; Chief Lloyd Layman, Parkersburg, W. Va. Fire Department; E. O. Mattocks, Phillips Petroleum Co.; Hugh McNair, Carbide & Carbon Chemicals Corp.; Sergeant A. M. Peel and Private L. N. Balcon, District of Columbia Fire Department Pump School; Chief T. Weston Scott, Jr., Cottage City Volunteer Fire Department; Chief Roi B. Woolley, Assistant Editorial Director, FIRE ENGINEERING, New York City, Chief Karl A. Young, Chief Mt. Ranier, Md., Volunteer Fire Department.

Certificates were issued to enrollees who met the requirements.

* * *

Provincial Fire School

The Dominion of Canada's Training Course for Fire Department Officers will be held October 26-28, 1949, at the University of Toronto, Toronto, under the auspices of the Dominion Association of Fire Chiefs and the Ontario Fire Marshals Office.

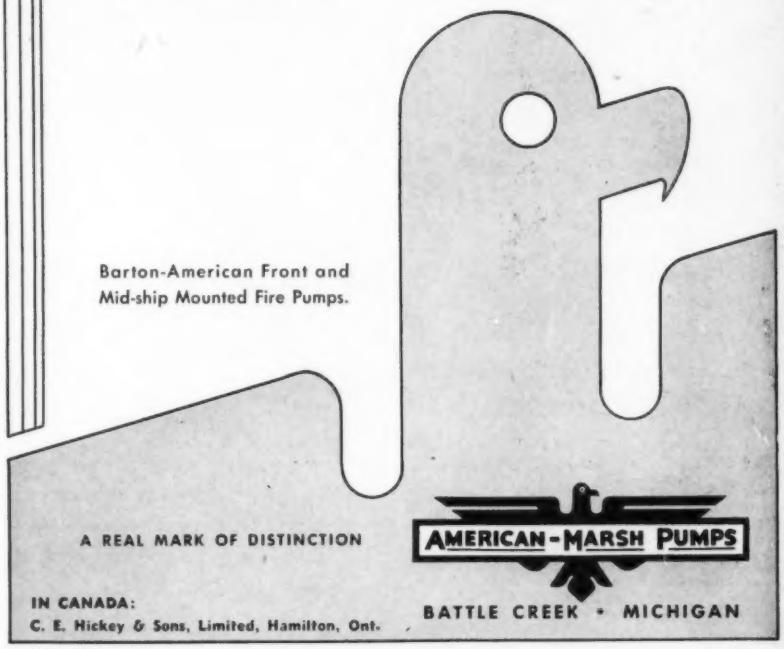
The topics and speakers for the three day session include: Special Fire Hazards, N. H. Nickerson, Associated Factory Mutuals; Organization and Discipline of Fire Departments, Chief R. C. McRonald, London, Ont.; City Fire Department Training Programs, District Chief William McCallum, Drill Instructor, Toronto Fire Department; Discussion of the Fire Departments Act, 1949, led by Fire Marshal W. J. Scott; Training Techniques for Instructors, Dr. J. D. M. Griffin, Medical Director of Mental Hygiene of Canada; Radiation Hazards Affecting the Fire Department, Dr. G. H. Guest, Atomic Energy Project, National Research Council, Chalk River, Ont.; Hazards of Electricity, E. W. McLeod, Chief, Electrical Inspector, Hydro Electric Power Commission of Ontario; Fire Pumps, H. M. Blank, Chief Engineer, Seagrave Corp., Columbus, Ohio; Institutional Fire Safety, J. E. Ritchie, Deputy Fire Marshal of Ontario; Training Processes and Techniques, Lt. Col. Stanley A. Watson, Ontario Department of Education; Design of Fire Apparatus, Hubert Walker, American LaFrance-Foamite Corp., Elmira, N. Y.; Psychology in Fire Department Work, Dr. William Line, Professor of Psychology, University of Toronto; Training Fire Fighters, Harold J. Burke, C-O-Two Fire Equipment Co., Newark, N. J.; Fire Department Pubic Relations, J. E. Jagger, General Manager, International Association of Fire Chiefs; Fire Department Records, Warren Y. Kimball, Editor "Fireman"; Motor Vehicle Driver Training, Inspector A. Watts, Traffic Accident Division, Ontario Provincial Police; Specialized Use of Carbon Dioxide Type Extinguishers, Harold J. Burke, and Responsibility of Fire Departments in Arson Detection, C. W. Caskey, Solicitor, Fire Marshal's Office, Toronto.

* * *

Southern Wisconsin and Northern Illinois Firemen's Association School

Nearly 1,000 firemen from southern Wisconsin and northern Illinois attended the 13th Annual Fire School of the Southern Wisconsin and Northern Illinois Firemen's Association, at Freeport, Ill., Sunday, Sept 11. The School enrollees were the guests of Fire Chief Al. Luedeke, Mayor

for the finest in fire pumps



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IN CANADA:
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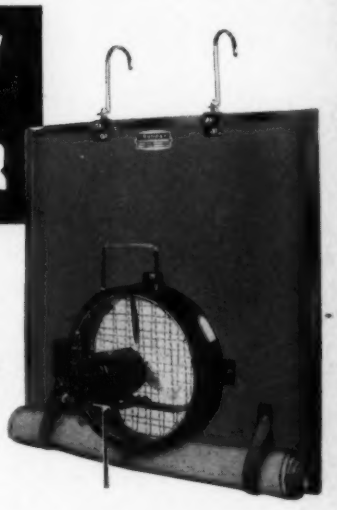
HERE'S THE NEW "TRUMPET" SMOKE EJECTOR



You have been asking for a practical smoke ejector. This is it. Moves over 2000 cubic feet of air per minute by actual ASHVE Code Tests. Quickly hooks over any door, window or other opening. Canvas drop prevents back draft. Operates on regular house current or 115 volt AC or DC electrical generating apparatus (60, 50 or 25 cycle). Heavy duty construction throughout.

- Weighs only 35 lbs. complete.
- ½ inch ply board in channel iron frame.
- Can be used on portable light plants or regular house circuits.
- Canvas drop prevents back draft.
- Optional hinges in middle for more compact stowage.
- 3-blade airplane type propellers for maximum efficiency.
- 50 ft. cord wraps around fan housing (not furnished).

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INVINCIBLE
NOZZLES

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Just another type —one of many— made by pioneers in nozzle manufacture.

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"All American Choice"

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Seldom the lowest priced but always the best.

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F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
Boston, Mass.
1837 — 1949

Glen Kunkle and the City Council of Freeport.

Various evolutions were carried out by the visiting firemen under the direction of R. Remich and John Hutchins of the Illinois State Fire Marshal's Office. Fire Chief Jacob Bruni of New Glarus, Wis., is president of the Association.

EDW. M. RHODES

* * *

Iowa Short Course for Paid Firemen

As part of the Iowa State firemen's training program, a four-day short course for fire prevention bureau personnel and fire inspectors will be held at Iowa State College, Ames, Ia., October 18 through 21. The session is designed primarily for firemen connected with paid fire departments, according to Robert Byrus, Director of fire training.

Subjects to be covered include Preparation of Fire Prevention Programs; Conducting Proper Inspections; Classifications of Relative Fire Hazards; Sprinkler Systems; Use of Sanborn Maps by Inspectors, etc.

According to Chief Byrus, many inquiries from out of the State fire personnel have been received concerning attendance at this course. He explains that everyone is welcome and there is no fee charged of any kind.

Persons in the News

Kammann New Fire Chief at St. Louis

On August 3 last, Fire Chief Frank Egenriether of St. Louis, Mo., handed in his resignation, following differences of opinion with the city's administration during which, according to the press, St. Louis Mayor Darst, a Democrat, attempted to oust the Chief, a Republican, in favor of a Democrat. The Chief resigned rather than see a reduction in his department of 124 men, which would have been necessitated by a so-called economy wave to reduce expenses in the department.

Walter H. Kammann

Following the Chief's resignation the Mayor announced the department would not lay off any men, and said he wouldn't take back Egenriether anyway, after efforts were made to bring them together. The Mayor said he would favor an examination and that the high man in the civil service tests, would be named Chief.

The examination was held, ten men contesting for the position. Walter H. Kammann, fire marshal of the department ranked first in the tests, and was named to head the department by Mayor Darst.

Meanwhile, the Mayor refused to permit Egenriether to withdraw his resignation, but offered him his choice of two lesser jobs, that of fire marshal or battalion chief. Egenriether said that he could not accept a lesser job than chief "and live with his conscience."

Some newspapers openly said that Egenriether was given a "rough ride" by the city hall. Meanwhile, the Mayor's attempt to switch heads of the department for political expediency seems to have backfired. The new chief, and a friend of Egenriethers, is a Republican. As fire marshal his salary was $425 a month. As chief he will receive $581 and work up to $645. The new chief is 56, and has been in the department since June 1, 1917. He was in World War I, was made lieutenant in 1925, captain in 1927, and appointed marshal by the late Chief Joseph Morgan.

Clay Easterly Appointed Martinsville Fire Marshal

Kent Mathewson, City Manager of Martinsville, Va., has announced the appointment of Clay A. Easterly to the post of Fire Marshal. The new appointee, a native Virginian, was formerly Fire Service Instructor of Virginia and director of the State Training School. His fire service experience began with the Bristol, Va., Volunteer Fire Company in 1928. He resigned when captain to enter the training field. He served as Fire Chief of the Volunteer Ordnance works, Chattanooga, Tenn., early in the last war. Easterly has been an active member of the Southeastern and International Association of Fire Chiefs and has for eight years attended the Memphis F.D.I.C.

Chief George Jacob Retires

Chief George E. Jacob, for 39 years a member of the Canton, Ohio, Fire Department, and since 1936 its commander, resigned his post Oct. 1, 1949, because of ill health. He is 59 years old.

The oldest man of the department in point of service, Chief Jacob has served the department since 1910, during which time he saw the department modernized and expanded. He became lieutenant in 1914, captain in 1916, assistant chief in 1930 and upon the retirement of Chief R. O. Mesnar in 1936, he succeeded to his position.

Chief Jacob is a member of the International Association of Fire Chiefs, International Association of Fire Fighters, and the Ohio Fire Fighter's Association.

Patricia Koltonski Weds

Miss Patricia Anne Koltonski, daughter of Fire Chief and Mrs. Alfred H. Koltonski of Rutland, Vt., was married to Lt. (j.g.) Harvey Eugene Lyon of Denver, Colo., on Sept. 17, 1949 at Christ the King Church in Rutland.

Following the ceremonies, a wedding breakfast was held at the Hotel Hardwell, Rutland, for the bridal party. A

reception, attended by 225 guests was held at the bride's home following the wedding. Out-of-town guests included many past and present fire chiefs and other officials prominent in the fire service.

Patricia Koltonski achieved wide prominence as the only feminine active member of the New England Association of Fire Chiefs, having been chief of her college fire brigade. Her husband is a student at the submarine school, New London, where the couple will reside. The bride's father, Chief Koltonski, is widely known to the nation's fire service.

Obituaries

Hamilton Chief Dies

Fire Chief William Murdoch, 69, head of the Hamilton, Ont., Fire Department since 1942, died August 29, from injuries received when he fell down the steps of his home three days previously. At that time he broke his arm and leg as he was leaving for work. His condition grew progressively worse from shock, until his death.

The chief had just weathered a public hearing in which he and his men had been criticised for their methods in fighting a $150,000 church fire. When the evidence was heard, the chief and his men were given a renewed vote of confidence by City Council.

During Chief Murdoch's tenure as chief, the force was increased to 280 men and the three-platoon system inaugurated. He was widely and popularly known throughout the Dominion.

Chief Murdoch was born in Scotland, joined the fire department in 1908 and was made lieutentant in 1921. He was promoted to district chief in 1933 and deputy chief in 1938. Four years later he was advanced to chief, following the retirement of Chief Ken Cassel.

He is survived by his wife, four sons and two daughters. He was active in the Dominion Association of Fire Chiefs.

Captain John Reinhard Dies

Captain John Reinhard, a member of the Union City, N. J. Fire Department for 23 years, died August 23, 1949. He was widely and popularly known throughout the fire service of the state.

Emeryville, Calif., Gets Improvements

The City of Emeryville, Calif., which has been growing industrially and in other ways, has been bringing its fire department into line with that expansion. Fire Chief L. S. Brous asked for and received a new 75-foot aerial which replaces a 17-year-old veteran.

The city has also awarded a contract for a new alarm system, to be in operation before the end of the year. Also, bids have been opened for a new $60,000 fire station to be erected in the industrial part of town. This station will be two stories, with dormitory over the apparatus floor, which will house five pieces of equipment.

A 1,250 GPM pumper is on order and is expected to be delivered shortly.

RICHARD SCHULLER

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Specify HALE

HALE FIRE PUMPS are built in all STANDARD CAPACITIES

Write today for the NEW FOLDERS on Hale Fire Pumps — outstanding for dependable, efficient and flexible performance.

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LEATHER HELMETS

The "NEW YORKER"
The toughest, strongest helmet made — a "regulation" standard wherever leather helmets are used.

The "SEAMLESS"
One-piece seamless leather crown, steel-reinforced—in "regulation" or drop-brim style.

Protection, comfort, durability—these are what every fireman wants, in a helmet. And generations of firemen, the country over, have found by actual experience that CAIRNS LEATHER HELMETS give them the utmost in all three of these essential features. There's a style to meet every preference, and a shape for every head.

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CAIRNS & BRO., Inc.
ALLWOOD, CLIFTON, N. J.
Outfitters to Firemen Since 1836

TIME TO ORDER
WINTER EQUIPMENT
Warm, waterproof turn-out coats and trousers—felt-lined boots—extra heavy wool mittens—flannel shirts—fleece-lined rubber coats—face shields. Early orders mean early delivery.

The Ax of Recognition

A Tie Klip made for Firemen by a Fireman

"The Fireman's"

A fine emblem of your calling is this chrome plated tie klip. Firemen throughout the country are wearing them.

ARE YOU?

May be secured direct from manufacturer at $1.50 each, or $1.25 each in lots of 12 or more.

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HIGH POWER PORTALITE

The finest dry battery portable light made Mile range. Powerful searchlight beam for 8 to 10 continuous hours. Instantly ready for any fire. Diameter 6". Size 14" high x 10" x 6". Only 9 lbs.

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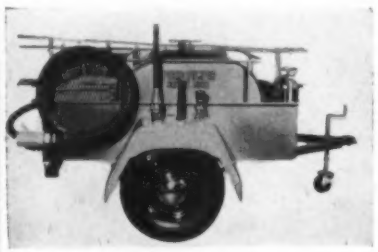
MASSACHUSETTS

Manufacturers' Announcements

New Porto-Pumper

A new model Porto-Pumper fire fighting trailer is announced by Porto-Pump, Inc. of Detroit, Michigan.

The unit is equipped with a demountable Porto Pump, which is a rotary positive displacement type rubber gear pump, powered by a 4 cycle gasoline engine; supply hose; aluminum extension ladder; 200 feet of fire hose; fire axe and hand extinguisher; straight stream nozzle; combination fog and straight stream nozzle, plus the added feature of a 200-gallon water tank supply.



New Porto-Pumper

Other new equipment offered as optional with the Porto-Pumper includes the latest type nozzles for foam producing, making this unit effective for protecting oil and gas storage depots, lumbering concerns, the forestries, small towns and villages, resorts, camps, motels, industrial plants, large farms and estates, ranches, food storage and produce elevators, golf and country clubs, airports, and all other isolated enterprises, etc.

New Ward Leonard Catalog

Ward Leonard Electric Co., Electronic Distributor Div., 53 W. Jackson Blvd., Chicago 4, Ill., has issued a new catalog (D-20A) listing stock relays and giving various helpful data on AC and DC units. The publication also includes general information on the functions of relays and construction of Ward-Leonard products.

These relays have wide application in the control of electronic and electrical devices, PA systems, radio transmitters, lights, gongs, sirens and countless other equipment and appliances.

A copy of Catalog D-20A may be obtained by writing the manufacturer.

"Penetred"—a New Skid Control Tire Introduced

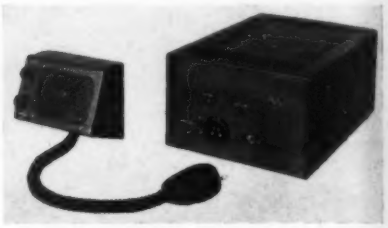
A new and revolutionary tire is being manufactured by the Penetred Corporation, Marshfield, Wis., which, from all accounts, has special significance for the fire service. Known as the "Penetred" skid control tire, it is said to provide year-round faster starting and quick, safe straight line stops, with 35 to 100% more tire mileage, whether it is used on trucks or passenger automobiles.

This unusual skid control and mileage is obtained with over 5,000 tempered steel claws that are firmly embedded in the tread rubber during the treading process. These claws cut through ice and snow in winter and grip on slippery road film in summer.

The tire has been tested by national sales organizations and is now on the market. The same basic idea that distinguishes Penetred tires has been incorporated in a new high class rubber shoe sole, which can be securely cemented to work shoes by special cement. The shoes are said to provide sure footing for the wearer.

New Mobile Radio Equipment for 30-50 MC Band by RCA

The "Fleetfone," a highly-selective two-way mobile communication system for operation in the 30-50 megacycle portion of the frequency spectrum, is announced by the Communication Section of the RCA Engineering Products Department.



RCA "Fleetfone" Showing Loud Speaker and Control with Hand Microphone, and Radio Transmitter-Receiver

The new equipment, a companion system to the recently announced RCA "Carfone" mobile equipment for use in the 162-174 megacycle band, is designed for such important services as fire protection, police, forestry, public utilities and so on. RCA has provided three models of the new products to meet individual requirements.

American-LaFrance Appoints Ralph Smith in Ohio

The American - LaFrance - Foamite Corporation announces the appointment of Ralph L. Smith as its representative for the State of Ohio. Mr. Smith has been with the American-LaFrance organization since May 22 and since that time has been associated with the sales division in various capacities.

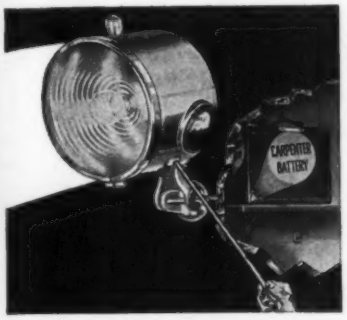
Ralph L. Smith

For a number of years he represented American-LaFrance in the States of New York and Pennsylvania. His knowledge of the fire apparatus, both from the standpoint of construction and application, covers a wide field of ex-

perience due to his associations at the factory before he became field representative, and through his many contacts with fire departments over a wide area.

"All-in-Head"—a New, Versatile Emergency Light

To provide emergency illumination wherever people congregate, which will automatically come on when the regular lighting system or circuit fails, the Carpenter Mfg. Co., Boston, Mass., has developed the "All-in-Head" Emergency Light.



Carpenter "All-in-Head" Light

The new unit, which consists of a flood-type lamp, which clamps to a dry battery, will adequately illuminate for emergency purposes a room 30′ by 30′. The light itself measures 6″ diameter by 6″ depth. It is furnished in attractive satin finish.

The "All-in-Head" may be clamped to the wall with battery standing up or on its side. All that is necessary to install it is to connect it to the regular light circuit where it will trip on, the moment the circuit fails. It can then be forgotten except for occasional easy battery tests.

Ryan to Distribute Oren Products in Alabama and W. Florida

The Oren Corp., Roanoke, Va., announces the appointment of Mr. R. H. Ryan of Tuscaloosa, Ala., as distributor of Oren fire apparatus for the State of Alabama and Western Florida. Mr. Ryan will sell both Oren commercial chassis units and Oren 750 and 1,000 GPM special units.

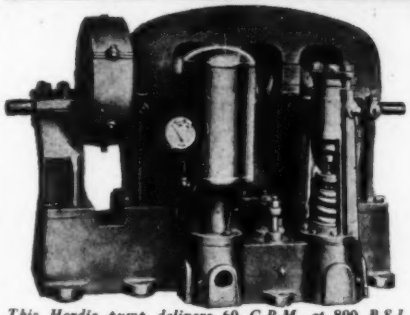
First Aid

(*Continued from page* 794)

holes in earth. Due to the possibility of firemen receiving severe cuts, I believe it is important that they be familiar with the proper method of controlling hemorrhage, since it has been my observation that treatment of most injuries received by firemen are held in abeyance until the arrival of an ambulance or doctor, or the injured person is removed to the hospital in a vehicle.

NOTE:—I have purposely omitted the hazard from hanging electric wires, for it is the duty of the officer in charge of severe fires to immediately have the service disconnected. We also make it a point to shut off the flow of illuminating gas at the meter or street valve to prevent explosion or asphyxiation.

FOG OR STREAM AT
800 P S I



This Hardie pump delivers 60 G.P.M. at 800 P.S.I. A smaller model gives 35 G.P.M. at 800 P.S.I. Both reach rating at slow engine speeds.

Your investigation will reveal many exclusive advantages in Hardie High Pressure Pumps and Fog Guns for Fog Fire Fighter units. Specify a Hardie pump when you buy—Hardie pumps are standard with the leading fire control equipment manufacturers.

Write for complete data.

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Los Angeles 11, Calif. • Hudson, Mich. • Portland 9, Oregon
Export Dept. — Detroit 26
Canadian Office — Clarence W. Lewis & Son Ltd. — Grimsby, Ont.

H·A·R·D·I·E
High Pressure PUMPS AND FOG GUNS
for Fog Fire Fighters

BRAXMAR BADGES

STANDARD WITH FIREMEN EVERYWHERE. SUPPLIED IN NICKEL, CHROME, GOLD PLATE AND ROLLED GOLD.

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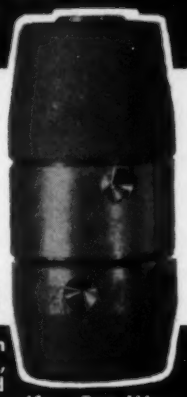
C. G. BRAXMAR CO., Inc.
216 E. 45 Street, New York 17, N. Y.

BAR-WAY HOSE COUPLINGS
FOR ¾" AND 1" BOOSTER AND HIGH PRESSURE FOG LINES

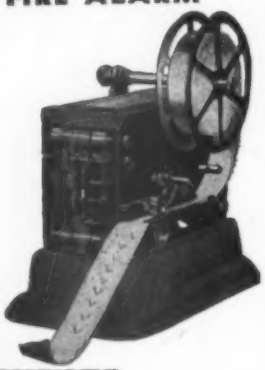


STREAMLINED
FULL FLOW
INTERNAL EXPANSION
ACCURATELY MACHINED
REMOUNTABLE

For maximum efficiency, economy and protection specify Bar-Way couplings attached to hose of proper size. Endorsed by leading hose manufacturers and demanded by more and more fire departments.

BAR-WAY MFG. CO., STAMFORD, CONN.
WEST COAST REPRESENTATIVE:
W. D. RIGDON
383 [illegible] Street, San Francisco 7

HARRINGTON PR-10
FIRE ALARM



FOR
ACCURATE
FIRE ALARM RECORDS

THIS punched tape register automatically makes records of the fire alarms or other emergency signals as transmitted over such circuits, in central fire alarm stations, outlying fire stations, police department offices, water works, etc.

HARRINGTON
SIGNAL COMPANY
MOLINE . . . ILLINOIS
In Canada:
C. E. Hickey & Sons Ltd., Hamilton, Ont.

MORNING PRIDE

RUBBER
COATS
and
PANTS

All
Wool

Detachable
Linings

Coats
Lettered
on Backs

ALSO
CANVAS
RUBBER
FABRIC
FIRESUITS
MITTENS • SUSPENDERS
See Your Morning Pride Dealer or Write
MORNING PRIDE MFG. CO.
1986 Home Avenue, Dayton 7, Ohio

Only a complete course, one which includes the Standard and Advanced courses of the American Red Cross, would seem adequate. However, many training departments minimize the necessity of such complete education. Chief Titus best described the importance of this training when he said, "It is a pleasant thought to know that the men of my company know how to take care of each other if anything should happen while they are engaged in fire-fighting. This confidence they have in each other enables us to do a better job for the citizens whom we protect from one of the nation's chief destroyers of property and lives."

Hospital Fire Prevention

(*Continued from page 792*)

following a twelve minute picture "More Dangerous Than Dynamite." Still later that day, the fire department demonstrated the method of evacuating persons from the fourth floor of the hospital building No. 86.

Evening showings of motion pictures were conducted for Dayton and Walla Walla hospital patients and hospital personnel.

Parking Ban

(*Continued from page 795*)

partment and traffic bureau personnel at seventy schools which figured in the fire department's inspections.

In these inspections, firemen not only sought out and endeavored to eliminate fire hazards that may have developed since the close of school but they devoted much time to expanding the shelter system near schools.

"The shelters to which children are taken protect them against the weather and dangers which are common at most fires," Chief Connelly said. The chief emphasized the importance of teachers calling the roll of their respective classes in the shelters or other meeting places, at the point of assembly after the fire drill-or fire. "Thus every child is accounted for, and if one should be found missing, an immediate hunt can be carried on to locate him." Chief Connelly said.

Police Officer Offers Firemen Arson Clue Hints

Speaking at the golden anniversary convention of the western New York Volunteer Firemen's Association in July, Charles L. Haggerty, Detective Sgt. Buffalo Police Arson Squad, and vice-president of the newly formed International Assn. of Arson Investigators, emphasized the seriousness of arson as a crime, and suggested that firemen bear the following in mind to aid in the investigation of arson:

1. What time was the last person in the building and who was it? Did he or she smoke, and how much?
2. Were the lights on or off when firemen arrived?
3. Was the main switch pulled?
4. Was the door open?
5. Did firemen smell any flammables or see fire floating on the water?
6. Were gas jets on and burning?
7. Was gas seeping out?
8. What was the color of the smoke and flame?

PAUL C. DITZEL

WENTWORTH'S
CUSTOM-MADE
"HEAD-MASTER"
UNIFORM CAPS
Union Made Prompt Delivery

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available. They are made in all the New and Standard styles by the Best Skilled Union Craftsmen. Over 50 years of experience and skilled workmanship guarantees you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

Write direct for latest circular and prices or see your local dealer.

AMERICA'S UNIFORM CAP HEADQUARTERS

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FORMAN CO., INC.
21-23 EDINBORO ST., DEPT. F.
BOSTON 11, MASS.

CIRCUL-AIR
FIRE HOSE DRYER

- Dries hose in a few hours.
- Saves space — fits in any corner.
- Keeps all hose ready for service.
- Makes good hose last longer.
- Reduces new building costs.
- Improves station design.
- Dries fire clothing, too.

WRITE FOR FREE BOOKLET

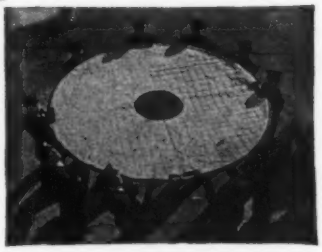
THE CIRCUL-AIR CORPORATION
575 East Milwaukee St.
DETROIT 2 MICHIGAN

In the Fire Service—

THERE'S NOTHING "JUST AS GOOD"

The fire service prides itself on buying "the best," everytime. *INSIST on ATLAS*—everytime—and you'll get the *best* life net!

ATLAS LIFE NETS



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Monroe FOLDING BANQUET TABLES

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NON-TIPPING

Ideal for Fire Halls

FOLDS THIN, ONLY 2½ INCHES

FOLDING CHAIRS

3 types easy - folding chairs in ALL STEEL or HARDWOOD. Write for prices.

THE Monroe COMPANY INC.
28 CHURCH STREET COLFAX, IOWA

IAFC Meeting

(*Continued from page* 789)

Acknowledging the honors, Fred Shepperd spoke of his service as having been a pleasure and a privilege and assured the Association of his continued interest and efforts in its behalf and that of the fire service of the nation.

Officers for 1949-1950

Interest in the election of officers, a high point in the business sessions of the Convention, centered in the choice of the second vice-president. It was a foregone conclusion that the 1948-1949 officers would move up but it was a question who would be named the junior vice-president.

When the ballots had all been counted the following slate of officers emerged to administer the Association for the coming year:

President, William J. Cawker, Topeka, Kans.

First Vice-President, John Alderson, Los Angeles, Calif.

Second Vice-President, Rudolph Swanson, Jamestown, N. Y.

Secretary-Treasurer, Daniel B. Tierney, Arlington, Mass.

Executive Secretary, Jay Stevens, Los Angeles, Calif.

Technical Advisor, Fred Shepperd, FIRE ENGINEERING, New York.

President Chase Receives Ring

A beautiful diamond ring was the gift of the Association to retiring-president Henry Chase. It was recalled how unstintingly President Chase had labored during his tenure as Association head, and before, as Vice-President and member of the Board of Directors.

In another presentation by the Association at the Annual Banquet, Mrs. Howard Dey, wife of host Chief Dey, was presented with a hand-woven quilt —a creation of Mrs. Lloyd Canning of Midvale, Utah, together with a bouquet of flowers.

Pass Important Resolutions

A number of timely Resolutions were offered by the Committee on Resolutions and adopted by the delegates after deliberation. Two of the most important measures had to with (1) uniform marine whistle signals for vessels in distress, and (2) for regulating careless handling of matches and cigarettes. These Resolutions will be reproduced in full in the next issue of FIRE ENGINEERING, together with the list of registrants and the Exhibitors at the Convention.

The Convention adopted without dissenting vote, the invitation of the City of San Francisco to hold the 1950 Convention of the Association in that city. The invitation was delivered personally by Fire Chief Edward Walsh of the Golden Gate City.

The last Conference held in that City was in 1939.

Mutual Federation Distributes New F. P. Week Publication

The Federation of Mutual Fire Insurance Companies has distributed the second edition of its publication *Tested Activities for Fire Prevention Committees*

IL
$12.25

IL—Identification light—roof mounted, visible from all directions for quick identification. Flasher mounted in top. Polished aluminum castings, red fresnel lens.

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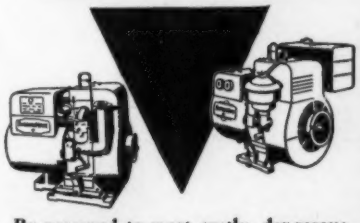
ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

Power Failure Insurance!

FAIRBANKS-MORSE GENERATING SETS



Be prepared to meet costly, dangerous power interruptions. Fairbanks-Morse generating sets deliver the power you need indefinitely. Available in A.C., D.C. or A.C.-D.C. . . . with manual, remote or automatic controls, in capacities from 350 to 35,000 watts. See your Fairbanks-Morse dealer or mail the coupon today.

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Gentlemen; Please send complete information about generating sets for standby service.

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S8-10

to all city Fire Chiefs in towns and cities over 1,000 population as well as to all Chambers of Commerce, Junior Chambers of Commerce, Farm Mutual Fire Insurance Companies, National Fire Waste Council chapters, and to State Fire Marshals, State Insurance Commissioners and others. Although the distribution was made in time to enable members of the fire service to utilize the constructive suggestions contained in the publication in connection with their Fire Prevention Week Campaign this year, the authors point out that the tested activities covered in the publication can be used to further sustained fire prevention drives.

The thirty-two pages of suggestions contain accounts of actual fire prevention activities conducted by Boy and Girl Scouts, Chambers of Commerce, Civic Clubs, Churches, City Departments—including Fire Departments, Industry, Insurance, organizations of various types, local merchants, advertising media such as newspapers and radio, and schools, theatres, and miscellaneous agencies.

Further information about the publication can be secured of the Federation of Mutual Fire Insurance Companies, Suite 1134, 919 North Michigan Avenue, Chicago 11, Illinois.

August Fire Losses

The estimated fire loss in the United States during August was $50,150,000, representing a 1.1 per cent increase over the July total and a 1.2 per cent increase over the total for August, 1948, according to W. E. Mallalieu, general manager of the National Board of Fire Underwriters.

August was the first month of the year during which the fire loss was greater than the loss for the same month of 1948.

Total losses for the first eight months of 1949 are estimated at $448,549,000. This is 7.9 per cent less than losses for the same period last year.

For the 12 month period ending August 31, 1949, losses amounted to an estimated $672,685,000. This is a decline of 5.2 per cent from losses of $709,621,000 for the 12 months ending August 31, 1948.

These reported losses under fire insurance policies include an allowance for uninsured and unreported losses.

Volunteers Control Hospital Fire In Short Order

Fire fighters of Copiague, L. I., have long dreaded a fire in the old Nassau-Suffolk General Hospital, Cedar Street, that community. Plans on how such a fire would be fought, should it occur, had been prepared and studied. Local firemen had arranged under the conditions to call on neighboring departments without delay, in such an emergency.

When fire did break out in the structure, believed due to a short circuit in an electric light in a patient's room, the pre-arranged plan of action paid off. Fire departments of Copiague, Amityville and Lindenhurst lost no time getting to the scene.

The fire occurred at 9:00 P.M. on the second floor, where the maternity ward is located. Thirty patients, including five newborn babies and their mothers, were evacuated by firemen and hospital

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Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

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with experience to meet present keen competition, wanted by Manufacturer of quality fire apparatus. Territories are available for the right men in

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N. CAROLINA	OHIO
S. CAROLINA	DELAWARE

Write to Box 95, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y., stating territory interested in, all qualifications, previous experience, etc.

WANTED

Fire Equipment Dealers to sell Morning Pride Rubber and Canvas Rubber Fabric Fire Coats and Fire Pants, All Wool Detachable Liner, Mitts and Suspenders.

Write today MORNING PRIDE MFG. CO. 1986 Home Ave., Dayton 7, Ohio.

FOR SALE

1947 International Fire Truck Tanker with 500 GPM front end pump, 500 gallon booster tank, aluminum ladders, flasher siren, crowbar, ax, booster reel, 150 feet of booster hose and rollers, lights, etc. Complete. All fire equipment new. Used as demonstrator. Priced to sell.

ALEXIS FIRE EQUIPMENT COMPANY
Alexis, Illinois

FOR SALE

1930 Ahrens Fox Aerial Ladder Truck Standard Equipment, Newly Painted New Ground Ladders. Will consider best offer.

Inquire

FIRE CHIEF GEORGE E. DALE
Hastings-on-Hudson, N. Y.

FOR SALE

10 ft. lengths hard rubber suction 4½ inch brass N.S.T. Per length	$25.00
Roof Ladders	$20.00
Universal Hose Spanners	$0.25
Cotton Duck Hose Straps	$1.00
Fog & Spray Tips	$1.50
Adjustable Hydrant Wrenches	$1.25
Double Males NST	$1.00
2½ x 2½ x 2½ one capped NST	$2.00
2½ x 2½ x 2½ NST Double clapper valves	$3.50
2½ NST Nozzle	$1.00
4½ x 2½ NST double female pumper, hydrant connection	$3.50

Shipping charges prepaid on orders of $5.00 or over

FRANK SHORTNER
Edgar, Wisconsin

FOR SALE

1930 American-LaFrance Double Bank City Service Hook & Ladder Truck, fully equipped. Over 300 feet of serviceable ladders, including a 50-foot extension ladder. Information may be had by contacting either the CHIEF, BALDWIN FIRE DEPARTMENT, or BOARD OF FIRE COMMISSIONERS, BALDWIN FIRE DISTRICT, Baldwin, Long Island, New York.

FOR SALE

1926 American-LaFrance Ladder Truck—Perfect running condition, fully equipped, including Life Net, 245 feet of ground ladders. May be inspected. Reasonable offer considered. Contact:

L. F. DORSEY, FIRE COMMISSIONER
BOROUGH OF BERGENFIELD
41 Harcourt Ave., Bergen County, New Jersey
Phone: Dumont 4-4398

FOR SALE

1931 Brockway City Service Hook and Ladder truck, in good condition. Asking $3,000. For further information write to:

JAMES F. BROWER, SECRETARY
Board of Fire Commissioners
Pearl River Fire District
Pearl River, New York

"FIRE ENJINES"

Famous WILL-O-LINE 19th Century horse drawn models in ½" scale. LaFrance Combination $3.50. Rumsey Reel $2.00. Amoskeag Steamer $6.50. Others. Complete parts and instructions. Write for circular.

BAY MODELS BOX 1014
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Progressive Distributor with large clientele located in southwest desires fire equipment lines and accessories of all types. Write us your offers.

Box 85, c/o FIRE ENGINEERING
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WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Factory. Also popular line of high grade fire hose. Prompt Delivery. Attractive proposition. Address Box 15, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

FOR SALE

One 1916 La France city service Ladder Truck equipped with the following complete set of ground ladders manufactured in 1939: one 45-foot extension; one 35-foot extension; two 25-foot straight; two 20-foot straight; one 14-foot roof. Contact:

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Top quality brand, in original factory packing, unused surplus in perfect condition.

¾" 4 Ply—50' Lengths, Brass N.S.T. Cplgs. —only $14.50 per length.

1" 4 Ply—50' Lengths, Brass N.S.T. Cplgs. —only $17.50 per length.

AN EXCELLENT BUY

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Phone Towson 1672

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CHIMFEX
THE CHIMNEY FIRE EXTINGUISHER

PUT OUT
CHIMNEY FIRES
SAFELY FROM INSIDE

Chimfex puts out chimney fires quickly, easily and without risk of life or property. Eliminates the hazard of working from the roof and damage from use of water or chemicals.

Simply scratch the tip, place at base of chimney and the fire is quickly extinguished with smothering gases.

Simple — Safe — Efficient. Don't be without them!

Box of four Chimfex..... $4.00

Order from your dealer or write:

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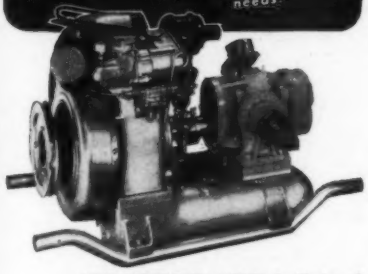
Standard Railway Fusee Corp.
P. O. Box 30
Needham Heights 94, Mass.

PACIFIC PUMPERS
famous for power plus portability
—now in a range of models for your exact fire protection needs!



NEW AIRCOOLED MODEL S—Choice of volume up to 36 g.p.m. or pressure up to 325 p.s.i. Weight approximately 85 lbs.

WRITE FOR SUGGESTIONS on application of portable equipment to your fire protection problem, with full specifications on appropriate models of the Pacific Pumper. No obligation.

ACCESSORIES, TOO! A complete line of hose, nozzles and other equipment and accessories used with portable pumpers. Ask for catalog.

PACIFIC Marine Supply Co.
FIRE EQUIPMENT DIVISION
SEATTLE 1, WASHINGTON

attendants, alive and unharmed. One of the babies, an incubator case, was taken to a home in the rear of the hospital. The patients were taken to another part of the hospital and placed near exists, just in case the fire should spread. Later they were returned to their quarters.

Chief Marshal Kane of Copiague led the volunteers in their operations. Property los negligible. Lives lost none!

Ship Fire

(*Continued from page* 785)

sandwiches, cigarettes and other refreshments to firemen, policemen, volunteer workers and survivors. The members of the organization remained at the scene from shortly after 3:00 A.M. until late Saturday afternoon. Of the thirteen members a few were out of the city, but two, including the "Chief," Arthur C. Fox, returned in time to do their stint.

It is believed the actual death toll will never be known. On September 27th these figures were released: identified dead 94; total bodies recovered, 139; still unclaimed, 45. "The toll may reach 175," reported the police.

Difficulties in arriving at accurate figures are caused by the loss of the ship's passenger and crew records and the fact that so many passengers believed to have been aboard and reported as "missing," may have hurried for their homes without reporting their survival. Further complication is the fact that a number of children in arms, known to have been aboard, were not listed. It was also revealed that there might have been visitors aboard the ship at the time of the fire whose presence was not recorded.

The steamship company released three different passenger lists on or before September 22, at which time the loss of life was set at 136. It admitted that no members of the crew had been lost. One figure placed the number of survivors at 567 and an estimated "more than 700 persons," including crew, on the cruise, although available records showed only 699.

After the fire, the ruins of the ship were literally sifted for belongings including jewelry, and other clews that would help disclose the number of victims. Efforts to pump out the lower holds were unavailing, although divers reported no more bodies in those areas. Two bodies were found by divers in waters near the vessel and more were expected to be located when the hulk was removed.

The Noronic cost, new, about $1,000,000. Steamship company officials reported it would take $5,000,000 to $6,000,000 to replace the ship at today's costs. The vessel is a total loss and will be junked. Meanwhile, it was said, insurance on the boat amounted to $1,000,000. There were conflicting reports issued on the question of personal liability coverage.

Convention Dates

Oct. 20-22—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Rock Island, Ill. Secretary-Treasurer, Chief Roy W. Alsip, Champaign, Ill.

Oct. 24-28—NATIONAL SAFETY CONGRESS. Annual meeting and exposition, Chicago, Ill. General secretary, R. L. Forney, National Safety Council, 20 N. Wacker Drive, Chicago 6, Ill.

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UNIFORMS

BADGES
CAPS
INSIGNIA

It is easy to order your uniforms by mail.

We supply an illustrated measurement form with simple instructions that show you how to take perfect measurements.

Write today for catalog No. G-60, samples of materials, price list and measurement form.

We also manufacture police uniforms. Write for police department catalog No. G-61.

RUSSELL UNIFORM CO.
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Corner 32nd St.—Phone MU. 6-0828
New York 16, N. Y.

TURN YOUR "DAYS OFF" INTO EXTRA INCOME!
(in a business you know)

Sell RANDOLPH Extinguishers
$84 A WEEK FROM 2 SALES A DAY

SEE PAGE 809

You can earn "extra" income easily, *in a business you already know*, by selling Randolph CO_2 Extinguishers to factories, homes, garages and hundreds of other prospects. Read our ad on page 809 and then write for the plan that's earning big money for firemen and fire officials all over the country. WRITE TODAY!

Randolph FIRE FIGHTING EQUIPMENT

RANDOLPH LABORATORIES, INC.
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CHICAGO 11, ILLINOIS

Give Fires the Gate – single and double!

No. 924
Hydrant Gate Valve

No. 925
Siamese with Gates

No. 924 has all brass construction. The single wedge disc resists the strain of quick opening and closing. Packing area is unusually large.

No. 925 is a sturdy piece of equipment, practical for every department. The Siamese section is made of brass and especially strong to carry the two Single Hydrant Gates.

Your request brings you full details on all Buckeye Fire Department Accessories.

Buckeye
FIRE DEPARTMENT ACCESSORIES

BUCKEYE IRON & BRASS WORKS, DEPARTMENT E
DAYTON 1, OHIO

HOWE Fire Truck Equipment to Meet Every Service
Established 1872
HOWE FIRE APPARATUS COMPANY, 1402 West 22nd Street, Anderson, Indiana

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OCTOBER, 1949

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Mars Signal Light Co.	772
Midwestern Mfg. Co.	774
Mine Safety Appliances Co.	766-767
Monroe Co., Inc., The	819
Morning Pride Mfg. Co.	818
National Foam Systems, Inc.	775
Oberdorfer Foundries, Inc.	764
Pacific Marine Supply Co., Fire Equipment Div.,	821
Powhatan Brass & Iron Works	810
Radio Corp. of America, Engineering Products Dept.	803
Randolph Laboratories, Inc.	809; 821
Republic Rubber Div., Lee Rubber & Tire Corp.	768
Rockwood Sprinkler Co.	762
Russell Uniform Co.	821
Safety First Co.	807
Smith, Inc., L. B.	773
Smith & Co., D. B.	805
Standard Railway Fusee Corp.	821
Stephenson Corp.	800
Sterling Siren Fire Alarm Co., Inc.	812
Wentworth-Forman Co., Inc.	818
Wooster Brass Co., The	813

THIS COULD BE YOUR HOME TOWN

IF IT ISN'T FABRIC, IT ISN'T GENUINE WAX AND PARA GUM TREATED TWILL WOVEN HOSE. All the hose shown below is a FABRIC BRAND NAME hose one year up to a possible thirty-five years old.

Above recent fire is typical of American Service. A two or three hour warehouse job in the suburbs just after the party is over, water off and the clean-up starts. Gutters full of chemical laden swill, hose clamps, broken stone and bottles, cinders, sharp kinks, grounded high tension wires, cars and the public swarming all over the hose and a few sections still lying in hot ashes. To build a hose that will stand up against these service conditions and stay flexible is a tough assignment. Fabric Fire Hose Co.'s WAX AND PARA GUM TREATMENT now some eighty years old and well tried out is the only treatment that has a Chinaman's chance against chemicals, mildew, rot, and while Fabric's hard twisted cabled yarn is the only hose as tough as the sole of your shoe, hose built for such service CANNOT be built to competitive specifications.

FULL CABLED FULL TWILL WOVEN GENUINE WAX AND PARA GUM TREATED HEAVY DUTY FIRE HOSE

FABRIC FIRE HOSE CO.

1869 SANDY HOOK, CONN. 1949

PROOF - *not Guesswork*

Makes FWD America's Foremost Heavy-Duty Truck

Here's actual operating proof in fire fighting service. This FWD Fire Engine is speeding around a sharp curve on its way to a fire in the country. Yes — with power on all four wheels, FWDs pull themselves around tight turns safely. You can be sure of this even before you buy, because FWDs are scientifically tested on the FWD proving ground to speed over a 100-foot unbanked circle without skidding. *No wonder FWD fire apparatus is used in fleets up to 50 units by America's leading cities!*

WHAT FWDs DO ON THE PROVING GROUND
1 Highball over hilly curved roads!
2 Slog thru mud — up to the bumper!
3 Speed over 100-ft. unbanked circle!
4 Twist over ditches — 18 inches deep!
5 Drive up 6% grade thru 3-ft. of sand!
6 Climb 70% grade from dead stop!
7 Climb 8-in. beam from standstill!
8 Drill pole holes to prove equipment!
9 Speed safely over level highways!
1
2
3
7

This is FWD's proving ground. This is your assurance that the FWD you select has the stamina to insure long life without expensive mechanical breakdowns.

An FWD speeds over the 100-ft. unbanked circle at the proving ground. For all the facts about FWD Fire Engines, see your FWD distributor — or write direct.

An Invitation To Fire Engine Buyers

We invite you to watch FWDs pass a series of the most rigid performance tests. Ask your FWD distributor to arrange your visit to our plant. Or—if you can't get away, ask him to show you the movie, *The FWD Story*. In either case, you will see for yourself how FWDs can help solve your fire-fighting problems.

Walter G. Olson
President
The Four Wheel Drive Auto Company

THE FOUR WHEEL DRIVE AUTO COMPANY
Clintonville, Wis. • *Canadian Factory:* Kitchener, Ontario
FOUR AND SIX WHEEL DRIVE TRUCKS

F-1

America's Foremost Heavy-Duty Truck